

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ

НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ
«ХАРКІВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ»

МЕТОДИЧНІ ВКАЗІВКИ

до виконання контрольних робіт
з навчальної дисципліни «Іноземна мова»
для студентів 4 курсу економічних, комп'ютерних
та гуманітарних спеціальностей заочної форми навчання

METHODICAL GUIDELINES

for Completing Assignments in "Foreign Language"
for 4th-Year Extramural Students of Academic Programs
in Economics, Computer Science, and the Humanities

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Методичні вказівки до виконання контрольних робіт з навчальної дисципліни «Іноземна мова» для студентів 4 курсу економічних, комп'ютерних та гуманітарних спеціальностей заочної форми навчання / Уклад.: Нетецька Т.М., Неустроєва Г.О., Рубцова В.В. – Харків : НТУ «ХПІ». – 2025. – 54 с.

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ПЕРЕДМОВА

Методичні вказівки призначені для самостійної позааудиторної роботи студентів 4 курсу економічних, комп'ютерних та гуманітарних спеціальностей та націлені на розвиток навчальних вмінь, необхідних студентам для успішного засвоєння розділів граматики, передбачених силябусом курсу іноземної мови. Методичні вказівки складаються з семи варіантів тренувальних контрольних робіт та мають на меті підготувати студента до виконання підсумкової контрольної роботи. Вони містять навчальний лінгвістичний матеріал, що відповідає програмному змісту модулів, вивчених впродовж 8 семестру в рамках дисципліни «Іноземна мова». Кожен розділ містить вправи та завдання для тренування навичок з розпізнання та вживання граматичних явищ, оглядового та ознайомчого читання тощо.

Варіант 1

A Complete the sentences using an appropriate form of the verb in brackets.

1. Their research (yield) important results. They can be widely used now.
2. The contacts of Ukrainian scientists with their colleagues in other countries steadily (grow) for the time being.
3. Our research group (investigate) the problems of environmental protection for five years now.
4. They (begin) to study this phenomenon before it became widely known.
5. It is a well-known fact that Ukraine (cooperate) with all European countries.
6. In scientific monographs much space often (devote) to experimental work.
7. They just (to invite) to participate in the work of a seminar on some urgent problems of biophysics.
8. He (to appoint) head of a department long before he obtained the academic degree of PhD in mathematics.
9. This problem (to solve) in the near future.
10. The seeds of rubber-producing plants had been sent from America to England before they (send) to other countries.

B Put the verbs in brackets into the correct form.

1. If I (have) more experience with coding, I could develop my own app.

2. If we (not implement) more cybersecurity measures, we'll be vulnerable to a data breach.

3. If the economy (continue) to grow at this rate, we'll see significant improvements in employment rates.

4. If the government implemented more trade tariffs, it likely (lead) to a decrease in imports and an increase in domestic production.

5. If the company (invest) in renewable energy sources earlier, it could have saved money on energy costs in the long run.

C Make sentences into reported speech.

1. The Finance Manager said, 'I can only give you preliminary figures'.

2. He asked me, 'Have you finished the report?'

3. He asked the PR staff, 'Where do you intend to advertise?'

4. He said to me, 'Don't forget to sign the contract'.

5. She said, 'It may be a good solution.'

D Choose the right variant (a, b, c or d) to fill in the gaps.

1. The results of his research were _____ in many published papers of that time.

a. reporting

b. reported

c. report

d. to report

2. Isobutylene is _____ widely now for the production of synthetic rubber.

a. using

b. used

- c. use
 - d. to use
3. The Federal Reserve _____ interest rates last month to curb inflationary pressures.
- a. raised
 - b. raises
 - c. has raised
 - d. had raised
4. Economists _____ the effects of the COVID-19 pandemic on the global economy for over a year.
- a. is analyzing
 - b. have been analyzing
 - c. will have analyzed
 - d. had analyzed
5. The government _____ new tax policies next year to stimulate economic growth.
- a. implements
 - b. implemented
 - c. will implement
 - d. has implemented
6. In recent years, developing countries _____ rapid economic growth.
- a. experience
 - b. experienced
 - c. will experience
 - d. have experienced

7. Economists predict that by the end of the decade, many emerging markets _____ major players in the global economy, which could have significant implications for developed economies.

- a. will have become
- b. will become
- c. are becoming
- d. become

E Change the words in the brackets to complete the sentences.

1. In the race between production of radioactivity and production of means of ..., the second may well be the (to protect, to win).
2. Radiation may cause ... (danger, ill).
3. Severe ... to radiation can be very dangerous, (to expose).
4. Radiation can cause burns and ... of various kinds, (to injure).
5. The ... of good living tissues by radiation makes it very dangerous for human health, (to destroy).

F Write 10 special questions based on the following text and translate them. Give your own answers and translate them.

Study shows AI-generated fake reports fool experts

If you use such social media websites as Facebook and Twitter, you may have come across posts flagged with warnings about misinformation. So far, most misinformation has been aimed at the general public. Imagine the possibility of misinformation – information that is false or misleading – in scientific and technical fields like cybersecurity, public safety and medicine.

There is growing concern about misinformation spreading in these critical fields as a result of common biases and practices in publishing scientific literature, even in peer-reviewed research papers. To test this threat, we studied

the impacts of spreading misinformation in the cybersecurity and medical communities. We found that transformer-generated misinformation was able to fool cybersecurity experts.

To illustrate how serious this is, we fine-tuned the GPT-2 transformer model on open online sources discussing cybersecurity vulnerabilities and attack information. We then seeded the model with the sentence or phrase of an actual cyberthreat intelligence sample and had it generate the rest of the threat description. We presented this generated description to cyberthreat hunters, who sift through lots of information about cybersecurity threats. These professionals read the threat descriptions to identify potential attacks and adjust the defenses of their systems.

We were surprised by the results. The cybersecurity misinformation examples we generated were able to fool cyberthreat hunters. Imagine this scenario with a crucial piece of cyberthreat intelligence that involves the airline industry, which we generated in our study. This misleading piece of information contains incorrect information concerning cyberattacks on airlines with sensitive real-time flight data.

A similar transformer-based model can generate information in the medical domain and potentially fool medical experts. During the COVID-19 pandemic, preprints of research papers that have not yet undergone a rigorous review are constantly being uploaded to such sites as medRxiv. They are being used to make public health decisions.

The model was able to generate complete sentences and form an abstract allegedly describing the side effects of COVID-19 vaccinations and the experiments that were conducted. This is troubling for medical researchers, who consistently rely on accurate information to make informed decisions. This kind of misinformation could put lives at risk by misdirecting the efforts of scientists conducting biomedical research.

We believe the result could be an arms race as people spreading misinformation develop better ways to create false information in response to effective ways to recognize it. Ultimately, everyone should be more vigilant about what information is trustworthy and be aware that hackers exploit people's credulity, especially if the information is not from reputable news sources or published scientific work.

G Read and Translate

The Silicon Valley

It is not made of silicon; and it is not a river valley; but forgetting that, Silicon Valley is probably the most famous valley in the world. Although it is not the place where the first computer was built (that was Manchester, England), Silicon Valley, near San Francisco, was the birthplace of the modern computer industry. For this, we can say thank you to scientists at the universities in California, and to the Hippies of the 1960's. It was in the nineteen-sixties that American "youth culture" really began. California, of course, already existed; but the Sixties Generation rediscovered it. At the time there were really two different forms of youth culture; the "Beach Boy" culture on the one hand, and the anti-establishment hippies and radical students on the other hand; and they all dreamed of California. For the Beach Boys, that meant southern California, where they could sing about surfing and cars; for the Hippies and radicals, it meant San Francisco, "flower power" and revolutionary new ideas. The campuses at Berkeley and Stanford University, near San Francisco, were hotbeds of new ideas, new technology, new culture, and new ways of living. When they finished university, many of the best students did not look for jobs with big companies like Ford or Exxon. Instead they wanted to be free and run their own operations. and stay in California, not far from San Francisco. Silicon Valley is

thus a group of small towns, including Palo Alto and San José, a few miles south of San Francisco.

The high-technology industry was already present around San Francisco. Intel had been founded in 1968, and in the same year the first computer mouse was built at Stamford University. In 1970, Xerox opened a research center in Palo Alto. There were also other electronics companies, like Hewlett Packard, and Fairchild, the world's first "semiconductor" company. Then, in 1976, an electronics student called Steve Jobs started a small computer company in his garage; he gave it the same name as the Beatles' record company: *Apple*. Very soon, more companies, like Seagate and Google appeared. "Silicon Valley" had arrived. There was even a sort of primitive Internet connecting many addresses in Silicon Valley, called the Arpanet.

Today, Silicon Valley is still the home of the computer industry; it is still full of high technology, but it is not the only center for high-tech in the USA. Today here are computer firms all over the USA. and all over the world; but Silicon Valley still has the largest concentration of high-tech companies and research centers. Microsoft, the world's biggest high-tech company, is not based in Silicon Valley. It is further north, near Seattle in the state of Washington.

H Which of these statements are true? Correct the false ones.

1. Silicon Valley has the largest concentration of high-tech companies and research centers.
2. In 2010 Xerox opened a research center in Palo Alto.
3. Silicon Valley, near San Francisco, was not the birthplace of the modern computer industry.
4. The campuses at Berkeley and Stanford University, near San Francisco, were hot-beds of new ideas, new technology, new culture, and new ways of living.

5. Steve Jobs started a small computer company in his villa.

Вариант 2

A Complete the sentences using an appropriate form of the verb in brackets.

1. In general, our laboratory (study) the problem of outer space.
2. There (be) many research groups in our department last term.
3. She (read) this book the whole evening yesterday.
4. Their research (yield) some interesting results. They can be used in a real-case scenarios now.
5. He (not to participate) in the work of any international scientific conference yet.
6. In publications of that institute much space (to devote) usually to problems of space research.
7. These data (to obtain) before the experiment began.
8. The fact that atom has a nucleus in its center, which is positively charged, (to discuss) by firnest Rutherford in 1911.
9. This problem (to solve) in the near future.
10. Nowadays synthetic rubber widely (use) in many branches of industry.

B Put the verbs in brackets into the correct form.

1. If we had invested in better data analytics tools earlier, we (avoid) many of our past mistakes.
2. If developing countries can sustain their current levels of economic growth, they soon (be able to) catch up to the developed world in terms of economic power.

3. If the company (fail) to adapt to new technologies, it will struggle to compete in the global market.

4. If the global economy (become) more unstable, many companies might consider moving their operations to countries with more stable economies.

5. If the price of oil (continue) to rise, it could lead to higher inflation and a decrease in consumer spending.

C Make sentences into reported speech.

1. He asked the operator, ‘Do you have to learn a new software program?’

2. They asked the Marketing Manager, ‘When will the new product be launched?’

3. He said, ‘I am sorry I have kept you waiting’.

4. She said, ‘We must plan our marketing carefully next summer to avoid such problems’.

5. He said to me, ‘Don’t pay the invoice!’

D Choose the right variant (a, b, c or d) to fill in the gaps.

1. The computer virus that infected the company's network last week _____ quickly identified and removed by IT professionals.

- a. was
- b. is
- c. has been
- d. will be

2. The process of vulcanization _____ in 1834.

- a. was discovered
- b. discovered

- c. discovers
 - d. to discover
3. Extended research into the chemistry of synthetic rubber is currently _____ by many outstanding Ukrainian scientists.
- a. carrying out
 - b. carried out
 - c. carries out
 - d. to carry out
4. The Great Recession of 2008 _____ a profound impact on the global economy.
- a. has
 - b. had
 - c. will have
 - d. is having
5. By the end of the year, the company its profits by 20% through cost-cutting measures.
- a. will have increased
 - b. increase
 - c. will increase
 - d. has increased
6. The economic outlook for the next quarter _____ positive, with many indicators pointing towards continued growth.
- a. looks
 - b. looked
 - c. will look
 - d. has looked
7. In recent years, computer hardware _____ increasingly powerful and affordable, making it more accessible to consumers.

- a. become
- b. became
- c. has become
- d. will become

E Change the words in the brackets to complete the sentences.

1. Very often man's ... violate the natural process of circulation of matter (active).
2. The mass of living matter is ... compared to the mass of the Earth (significant).
3. The problem of ... against ... has gone beyond national boundaries (to protect, to contaminate).
4. The biosphere is considered to be a ... phenomenon of a truly cosmic scope (planet).
5. Many artificial substances are ... to the biosphere (to know).

F Write 10 special questions based on the following text and translate them. Give your own answers and translate them.

Debate: ChatGPT offers unseen opportunities to sharpen students' critical skills

As gloomy predictions foretell the end of homework, education institutions are hastily revising their policies and curricula to address the challenges posed by AI chatbots. It is true that the emergence of chatbots does raise ethical and philosophical questions. Yet, through their interactions with AI, people will inevitably enhance skills that are crucial in our day and age: language awareness and critical thinking.

Sophisticated parroting

It is not surprising that the success of ChatGPT passing an MBA and producing credible academic papers has sparked worry among educators about how students will learn to form an opinion and articulate it. This is indeed a scary prospect: from the smallest everyday decisions to large-scale, high-stakes societal issues, we form our opinions through gathering information, doing some research, thinking critically while we evaluate the evidence and reasoning, and then make our own judgement. Now cue in ChatGPT: it will evaluate the vast dataset it has been trained on, and save you the hard work of researching, thinking and evaluating. The glitch is that its answers are not based on independent research. The AI application does not explain its actions and their consequences. The world ChatGPT presents to us is based on *argumentum ad populum* – it considers to be true what is repeated the most. Of course, it's not.

This is why we agree with those who doubt that ChatGPT will take over our content creating, creative, fact-checking jobs any time soon.

A chance to sharpen our critical skills

Users need to be savvy in both *prompting* and *evaluating* the output. Prompting is a skill that requires precise vocabulary and an understanding of how language, style or genres work. Evaluation is the ability to assess the output. In academic scholarship this kind of knowledge is called *language awareness*.

A potential weapon against misinformation

Back to ChatGPT: as we can see, for the best results, users need to prompt it right, and then check the produced text against the prompt criteria. For this they need to understand the nuances of language, context and intended purpose.

Why is this knowledge such a big deal? It is invaluable in our age of misinformation and populism when the issues society grapples with are mostly abstract and intangible. The more people know about how language works, the

more they start to notice how politicians and the media create versions of the world for them through their communications.

It is impossible to predict the extent to which AI applications like ChatGPT will disrupt the world of education and work. For now, society can both prepare for the dangers of AIs and embrace their potential. In the process of learning how to interact with them well, however, people are bound to become “prompt savvy”, and with that more aware of how language works. With such language awareness comes the power to consume texts with a critical eye. A glimmer of optimism for a sustainable future is that critical reading leaves less room to manipulation and misinformation.

G Read and Translate

The Story of Jeans

In 1996, someone found some very old clothes in an old mine in Nevada, USA; they included a pair of dirty old jeans. Today, those jeans are very valuable, and they are now in the Levi Strauss Archival Collection, in San Francisco.

The jeans, which are over 140 years old, are the oldest pair of Levi's 501 jeans in the world. They are almost the same as a modern pair of 501's; there are just some small differences in the detail. For instance, today's 501's have two back pockets, the old pair just has one. Jeans were the classic clothes of the American West.

In 1853, a young tailor from Germany, called Levi Strauss, began working in San Francisco; Levi sold thick canvas to miners; the miners used the canvas to make tents. One day, a miner told Levi that he could not find trousers that were strong enough for work in the gold mines. Levi decided to make some trousers out of canvas. Very soon, he had sold all the canvas trousers he had made! They were just what miners wanted. However, the canvas was rather

heavy and stiff. Levi therefore began to look for a different textile; soon he found a heavy textile from France; it was called *serge de Nimes*. Americans just called this *de Nimes*, and this name soon got reduced to *denim*. Denim was a bit lighter than canvas, but it was very strong; it was ideal for miners. However, original denim was almost white, and miners did not like the color! Their denim trousers got dirty as soon as they began working! Levi Strauss therefore decided to use colored denim, and he chose dark blue. In 1873, he began to make denim trousers with metal rivets to make them stronger. This was a radical new idea: "Blue jeans" had arrived! Levi's jeans were so popular, that his company got bigger and bigger; soon, other firms were making blue jeans too. Miners liked them, but so did cowboys and other working men. Blue jeans became classic American working trousers.

After the Second World War, jeans became popular all over the world. Today, blue jeans are made throughout the world – most of them in Asia. Very few jeans are now made in the USA, because of the cost: but it is still possible to buy blue jeans that are made in San Francisco if you have a lot of money to spend. Today there are hundreds of different brands of jeans. Many top fashion brands, like Armani or Benetton, make their own blue jeans. But for real authentic jeans, "Levi's" are still the most popular brand.

H Which of these statements are true? Correct the false ones.

1. Jeans were the classic clothes of the English people
2. In 1991, a young tailor from Italy, called Levi Strauss, began working in Paris.
3. Denim was a bit lighter than canvas, but it was very strong; it was ideal for teachers.
4. Many top fashion brands, like Armani or Benetton, make their own blue jeans.

5. Levi Strauss decided to use colored denim, and he chose dark green.

Вариант 3

A Complete the sentences using an appropriate form of the verb in brackets.

1. Our department (begin) to study the problems of environmental protection last year.

2. The fact is scientific cooperation (contribute) to mutual understanding between different countries.

3. We (to discuss) this problem for two years but still cannot find the solution.

4. In the seventeenth century learned societies (organize) in England and France.

5. Phosphorus (to catch) fire easily and (to glow) in the dark.

6. Actually, the phenomenon of radioactivity (to use) widely in industry, medicine and agriculture.

7. This difficulty (overcome) much later.

8. In the middle of the 19th century, due to a fortunate accident a uniform stable substance (obtain) by heating the mixture of natural rubber and sulphur to high temperatures.

9. Fertilizers containing phosphates (to use) widely in agriculture.

10. Don't switch on the light. The experiment (to carry out) in complete darkness.

B Put the verbs in brackets into the correct form.

1. If we (automate) more of our routine tasks, we could free up time for more complex problem-solving.
2. If the pandemic (continue) to disrupt global supply chains, we can see shortages in critical industries.
3. If the trade war between major economies escalates, it (have) a negative impact on global economic growth.
4. If the government (implement) austerity measures, the country might have avoided a prolonged recession.
5. If I (be) to start my own software company, I would focus on creating products that prioritize user privacy.

C Make sentences into reported speech.

1. He asked the Sales Manager, ‘What discount will you give to your distributors?’
2. He told me, ‘You must collect more data’.
3. They asked me, ‘Has all the research been completed?’
4. They asked him, ‘How often do you travel abroad?’
5. He said to the boss, ‘If you don’t give me a pay rise, I’ll resign’.

D Choose the right variant (a, b, c or d) to fill in the gaps.

1. The theory of biosphere _____ worked out in the first half of the XX century.
 - a. was
 - b. is
 - c. has been
 - d. had been
2. The set pattern of today’s biosphere is _____ unbalanced by man’s current activity.

a. being

b. been

c. be

d. to be

3. Generally, much time is _____ for obtaining these data.

a. requiring

b. required

c. requires

d. to require

4. In the 1980s, personal computers _____ more widespread, leading to a revolution in the way people worked and communicated.

a. become

b. became

c. has become

d. will become

5. The government announced that it _____ financial support to small businesses affected by the pandemic.

a. will be providing

b. would provide

c. will be provided

d. has provided

6. Programmers _____ on the new software update for several months to fix bugs and add new features.

a. work

b. have been working

c. will work

d. worked

7. By 2025, experts predict that the majority of computer systems _____ artificial intelligence to automate routine tasks.
- will be using
 - will use
 - have been using
 - will have used

E Change the words in the brackets to complete the sentences.

- In Europe there was (to consider) resistance to the (to adopt) of our «Arabic» numbers.
- The concept of (symbol) representing «nothing» in a numerical system is one of man's greatest intellectual achievements.
- The zero of modern European system of counting had its (to originate) in India about 500 A. D.
- Classical Greeks denoted the numbers 238 by (to write) three letter symbols adjacent to each other.
- Most of developing countries conduct ... foreign policy (to depend).

F Write 10 special questions based on the following text and translate them. Give your own answers and translate them.

Bitcoin's Climate Impact Is Bigger Than Beef Farming – And It's Only Getting Worse

Based on its market share, the world's most notorious cryptocurrency, Bitcoin, results in more climate damage than the production of beef and nearly as much damage as crude oil, researchers in the United States have calculated.

To consider Bitcoin truly sustainable, its climate damages should decrease over time as the technology matures and becomes more efficient. But these new calculations show that clearly isn't happening.

Bitcoin mining itself is based on an exponential growth in computing power, which, in turn, requires exponentially more electricity. In 2020, for instance, Bitcoin mining demanded more energy than either Austria or Portugal used in the same year.

Bitcoin, like many other cryptocurrencies, is based on 'proof-of-work' mining (PoW), which is a highly energy-intensive way to provide encrypted validation of money in a decentralized public ledger. The verification process is inherently competitive, with 'miners' competing to solve cryptographic puzzles to validate transactions on the blockchain and create new coins. Special computers could, theoretically, keep generating new blocks forever, but each one adds enormous amounts of energy to the verification process. In other words, each new blockchain that is mined is harder to find than the last.

If the computational effort required to mine blockchains was powered by renewable energy, the system might be more sustainable. But today, estimates show more than 60 percent is powered by fossil fuels like coal and natural gas. Even in a scenario where Bitcoin mining uses a much higher proportion of renewable energy than it does today, there will still be large and growing climate damages from this industry.

The current estimates on Bitcoin's climate damages are based on the global electricity usage required for PoW-based cryptocurrencies, but there are other, greener alternatives out there. Cryptocurrencies based on a proof-of-stake (PoS) system have recently been put forward as a solution to the high-energy nature of PoW processes. PoS is another way to validate cryptocurrencies that gives away the next block on the blockchain at random, instead of to the winner. While it requires less investment of hardware to be in the game, individuals still need to pay a substantial 'stake', which requires having the capital to start with. But switching from a PoW to a PoS system would require Bitcoin miners to

swap all of that hardware for cash, a cost of time and effort few would be willing to do.

However, it's unlikely Bitcoin will make the switch. Experts say that the Bitcoin community is already too invested in its PoW system to want to change. Bitcoin currently makes up about 41 percent of the global market share among cryptocurrencies. If the industry doesn't shift its production path away from PoW, or move towards PoS, then this class of digitally scarce goods may need to be regulated, and delay will likely lead to increasing global climate damages.

G Read and Translate

California's earthquake risk

California is known all over the world for its size, its sun, and its surf, its glamour and its optimism. But it is known too as "Earthquake Country " — a truly vulnerable region where big devastating quakes have occurred in the past and could happen again. It is unlikely that a disaster on the scale of recent disasters in Italy or Japan could occur in California; California has learnt from its past disasters, and most buildings are designed to withstand major quakes.

Nevertheless, Californians are worried. When will the next big quake strike the state, and where will all the shaking and crumbling and rocking begin? Nobody knows for sure, but at all times California is on the alert. There could be an earthquake in California today. Consequently the earth is permanently monitored with high-tech seismographs situated in universities and government research stations; they are constantly watched by highly-trained employees and volunteers from the California Office of Emergency Services; and students in every school receive training in what to do in the event of an earthquake. Working at Menlo Park, near Stanford University, in the middle of "Earthquake Country", scientists from the United States Geological Survey are always

monitoring and studying fault systems, and trying to predict where earthquakes are going to take place next.

Back in 1988, a team of USGS scientists completed a ten-year survey on "earthquake possibilities", and came up with the conclusion that there's going to be a lot of shaking in the years ahead. In particular, they predicted a 50% possibility of an exceptionally big quake of 8.3 sometime before 2018, somewhere along the San Andreas or Hayward faults. In the two centuries from 1812 to 2012, California has suffered dozens of earthquakes. The last seriously damaging earthquake was the 1994 quake in the Los Angeles area, that registered 6.7 on the Richter scale, and did up to \$40 billion worth of damage. A much stronger quake, of 7.2 on the Richter scale, struck Baja California (Mexico) in 2010, doing over a billion dollars worth of damage in this far less populated area. Since 1812, California has experienced 15 major earthquakes of a magnitude of 7.0 or larger. Two of these were the great quake of 1857, with an estimated magnitude of 8.3, and the great earth-quake of 1906, which nearly levelled the port city of San Francisco and had a magnitude of 8.25.

Responsibility for California's earthquakes lies in the fact that the state sits atop the famous and terrifying *San Andreas Fault*. This fault rocks and quakes often and unexpectedly as the earth's tectonic plates shift along fault lines that run 700 miles from the Mexican border to the north California coast. It is almost unbelievable that more than 20 million people should choose to live along this fault; but because their state has prosperity, an ideal climate, and a wonderful ambiance, Californians take a laissez-faire attitude to the potential danger.

H Which of these statements are true? Correct the false ones

1. California is vulnerable region where big devastating quakes have occurred.

2. Californians are not worried about the next big quake strike the state.
3. In the four centuries California has suffered dozens of earthquakes.
4. Responsibility for California's earthquakes lies in the fact that the state sits atop the famous and terrifying *San Andreas Fault*.
5. Californians don't take a laissez-faire attitude to the potential danger.

Вариант 4

A Complete the sentences using an appropriate form of the verb in brackets.

1. Some time ago they (discover) a very interesting phenomenon.
2. On the whole, the scientific cooperation between these countries (extend) to many areas of human activities.
3. The speaker just (to mention) the role of genetics in the development of medical sciences.
4. They (to predict) the phenomenon long before its discovery.
5. Now he (to study) the possibilities of using solar energy for practical purposes.
6. The researches into creating new materials extensively (carry out) now.
7. Our living conditions greatly (improve) by the creation of new materials.
8. Quantitative data on these reactions yet (not obtain).
9. Nowadays world science (face) with the task of protecting the biosphere from pollutants.

10. The seeds of rubber-producing plants (send) from America to England before they were sent to other countries.

B Put the verbs in brackets into the correct form.

1. If I had known about this software earlier, I (recommend) it to my colleagues.

2. If the user interface (be) more intuitive, our customers would be more likely to recommend our product to others.

3. If businesses (not invest) in cybersecurity measures, they can become vulnerable to cyber-attacks.

4. If interest rates continue to rise, it may (become) more difficult for individuals and businesses to borrow money.

5. If the economy (experience) another recession, the government might consider implementing stimulus measures to increase consumer spending.

C Make sentences into reported speech.

1. She said, 'It's important for you to be at the next staff meeting'.

2. I asked her, 'Are you prepared for your tomorrow's presentation?'

3. The Personnel Manager was asked, 'When will the new training programme be introduced?'

4. He said, 'Let's go on a tour of the company's production area, shall we?'

5. He said to us, 'The purpose of my visit here is to exchange opinions with you'.

D Choose the right variant (a, b, c or d) to fill in the gaps.

1. Machine learning algorithms _____ used to predict future outcomes and optimize decision-making processes in the upcoming project.

- a. will be
- b. is
- c. was
- d. has been

2. The data _____ analyzed using advanced statistical techniques to identify patterns and trends next week.

- a. will be
- b. is
- c. are
- d. have been

3. The data analysts _____ to ensure the accuracy of the data analysis before presenting the results to the stakeholders.

- a. will be wanted
- b. wanted
- c. wants
- d. had wanted

4. Last year, the company _____ its computer systems to improve efficiency and productivity.

- a. upgrading
- b. upgraded
- c. upgrade
- d. will upgrade

5. Over the next few years, cloud computing _____ even more popular, allowing users to store and access data remotely.

- a. becomes
- b. became
- c. will become
- d. become

6. IT professionals _____ about the dangers of cyber-attacks for years, and many companies have invested in cybersecurity measures as a result.

- a. warn
- b. have been warning
- c. will warn
- d. warned

7. Currently, computer scientists _____ on developing more efficient algorithms to improve the performance of artificial intelligence systems.

- a. are working
- b. have been working
- c. will work
- d. worked

E Change the words in the brackets to complete the sentences.

1. CO₂ is only a trace gas present in the atmosphere at a (concentrate) of about 0,3 per cent.

2. It (absorption) radiant energy, and heat trapped in this way could (altering) the world climate substantially.

3. It enhances the «greenhouse effect» and leads to the (increasing) of surface temperature.

4. The human (act) that are increasing the CO₂ content of the atmosphere could cause a general (warm) of the climate.

5. Some urgent measures must be taken lest the global (climate) balance should be upset.

F Write 10 special questions based on the following text and translate them. Give your own answers and translate them.

Ocean Cleanup's supersized system proves its worth with "massive" haul

Back in August, the Ocean Cleanup Project returned to the waters of the Great Pacific Garbage Patch with a redesigned trash-collecting system that was its largest yet. This upsized approach appears to be paying some dividends, with System 002's final phase of testing hailed a success and marked by a "massive" haul of plastic waste.

The Ocean Cleanup Project first popped up back in 2013 with grand plans to clean plastic from the oceans using massive floating barriers, and the system has undergone a number of reinventions since.

The System 002, nicknamed Jenny, that was launched in August marked a significant departure from previous iterations, as it ditched a passive design in favor of active propulsion. This meant rather than relying on floating system that moved with the wind and the motion in the ocean, the horseshoe-shaped Jenny would be towed along by crewed vessels at either end.

The idea was to move Jenny through the Great Pacific Garbage Patch at a steady speed of 1.5 knots, funneling plastic waste into a retention zone at the far end. With a length of 800 meters (2,640 ft), Jenny is also the biggest system deployed by the Ocean Cleanup Project, and its first large-scale system.

After towing Jenny out to the patch in mid-August, the Ocean Cleanup team kicked off a trial regime involving more than 70 separate tests to see if it is up to the job. The most recent of these took the form of a "full duration" test, designed to completely fill up Jenny's barriers over the course of six weeks. This final test of the system was completed over the weekend, and to great success, according to the team.

"It all worked!!! Massive load. We'll try to get the footage to land ASAP to share," tweeted Ocean Cleanup CEO Boyan Slat.

The team is still processing its catch so we can expect more information to be forthcoming on how much Jenny is capable of cleaning, but one thing is clear it will take many Jennies to put a dent in the issue. Millions of metric tons of plastic waste wash into the ocean each year, and many have doubts about the capacity of trash-catching barriers to tackle the problem, and whether these efforts might do more harm than good.

For its part, the Ocean Cleanup crew is well aware of this, and is simultaneously endeavoring to prevent plastic waste entering the ocean through a river-based collection system called "The Interceptor." It still sees the accumulated waste in the ocean as a major problem that needs solving, as the longer it remains swirling about in the seas the more of it breaks down into problematic microplastics that are difficult to track and pose all sorts of problems to the environment.

G Read and Translate

Climate Change

There are still some people who say that climate change is not real! Others say that it is real, but we cannot do anything to stop it, so we need not try. A few people even say that climate change is not caused by human beings. But most people now understand that our world is getting hotter, and we have to do something about it. We only have one Earth, and we can't get another one.

Twenty years ago, people could perhaps imagine that climate change was not a real problem, because some scientists still had doubts. Today almost all the world's scientists agree: the world is getting hotter, and it is the fault of human beings. Our planet is going towards a climate catastrophe, but we can stop its worst effects. Indeed we must do everything possible to stop them.

In November 2021, world leaders (or most of them) met in Glasgow, in Scotland, for the COP26 summit. They took quite a few decisions, to try and

stop the Earth getting too warm. Many countries promised to become "carbon neutral" before 2050. Some have promised to become carbon-neutral even faster. World leaders agree that we have to stop using coal and oil to generate heat and electricity; we should use green energy sources instead, known as "renewables." Before the year 2100, all the energy that we use may perhaps come from renewable sources; the sun, the sea, the wind and rivers can produce more than enough energy for everyone on our planet, but we still have a long way to go.

The green energy revolution has already begun, but the challenges are still enormous. "Going green" will cost an enormous amount of money, and use some kinds of technology that do not yet exist. Also there are some people who believe that it will be too expensive. Although most people care about our planet and know that we have to act now to avoid a climate catastrophe, there are other people who have different priorities. There are people who just don't care, and there are people who care more about themselves than about the world around them. There are people and big companies that just want to make money, and are not interested in anything that gets in their way. Most importantly, there are politicians who are frightened of doing anything that other people will not like; they make promises, but they do not keep them.

H Which of these statements are true? Correct the false ones

1. Climate change is not caused by human beings.
2. Many countries promised to become "carbon neutral" before 2030.
3. We should not use green energy sources.
4. "Going green" will cost an enormous amount of money, and use some kinds of technology that do not yet exist.
5. Our planet is going towards a climate catastrophe, but we cannot stop its worst effects.

Вариант 5

A Complete the sentences using an appropriate form of the verb in brackets.

1. We (to do) this research since 2019.
2. The Institute of Geophysics currently (to carry out) the research into the structure of these planets.
3. Our scientific contacts with European countries (grow) very quickly in the first decade of the 20th century.
4. We just (to finish) the analysis of the mixture.
5. In the past centuries many universities (control) by the church.
6. This technological process greatly (improve) due to a fortunate accident.
7. This assumption yet (not verify).
8. Today this compound widely (use) for the production of synthetic rubber.
9. The established mechanisms of the biosphere (disrupt) by huge volumes of modern synthetic compounds.
10. The biosphere (interpret) by Vernadsky as the global envelope produced on the Earth with the development of life.

B Put the verbs in brackets into the correct form.

1. If I (have) the necessary resources, I can develop a new software program capable to revolutionize the industry.
2. If emerging markets (improve) infrastructure and governance, they may attract more foreign investment and experience faster economic growth.
3. If the global economy (experience) another major recession, it can take years to recover to pre-recession levels of growth.

4. If inflation (rise) too quickly, the central bank might need to increase interest rates to prevent the economy from overheating.

5. If we (invest) in better data analytics tools earlier, we could have avoided many of our past mistakes.

C Make sentences into reported speech.

1. We asked the Purchasing Manager, ‘Did you call the supplier yesterday?’

2. They asked the Project Manager, ‘How many subsidiaries will participate?’

3. He said to me, ‘I think you ought to see the lawyer’.

4. The Office Manager said to the clerk, ‘Send the letter immediately!’

5. He said, ‘The old equipment must be replaced even if it requires a lot of money.’

D Choose the right variant (a, b, c or d) to fill in the gaps.

1. The engineers _____ use machine learning algorithms to predict future outcomes and optimize decision-making processes in the upcoming project.

a. will

b. are

c. have

d. had

2. The data had been _____ using advanced statistical techniques before the results were presented to the stakeholders.

a. analyze

b. analyzing

c. analyzed

- d. to analyze
3. The engineers have already _____ to use machine learning algorithms in the upcoming project.
- a. decide
 - b. deciding
 - c. decided
 - d. decide
4. During the 1970s, many countries _____ stagflation, a combination of high inflation and slow economic growth.
- a. experience .
 - b. experienced
 - c. will experience
 - d. have experienced
5. By the end of the decade, quantum computers _____ a reality, allowing for even more powerful computing capabilities.
- a. will have become
 - b. became
 - c. will become
 - d. become
6. In recent years, some developed countries _____ protectionist policies to limit imports and promote domestic industries, which _____ to tensions in international trade relations.
- a. have implemented; has led
 - b. implemented; led
 - c. had implemented; had led
 - d. will implement; will lead
7. In the coming years, emerging markets such as China and India _____ increasingly important players in the global economy.

- a. become
- b. became
- c. will become
- d. have become

E Change the words in the brackets to complete the sentences.

1. The use of nuclear methods has opened up tremendous ... (technology, possible).
2. The influence of nuclear physics on other branches of science was very ... (power).
3. The ... of light was measured with special instruments (intense).
4. Maria Curie's .. of the radioactivity of uranium ores were the first step to the ... of polonium, (to observe, to discover).
5. The ... of their results show that they were obtained using different experimental techniques, (to compare).

F Write 10 special questions based on the following text and translate them. Give your own answers and translate them.

Sub-diffraction optical writing enables data storage at the nanoscale

The total amount of data generated worldwide is expected to reach 175 zettabytes (1 ZB equals 1 billion terabytes) by 2025. If 175 ZB were stored on Blu-ray disks, the stack would be 23 times the distance to the moon. There is an urgent need to develop storage technologies that can accommodate this enormous amount of data.

The demand to store ever-increasing volumes of information has resulted in the widespread implementation of data centers for Big Data. These centers consume massive amounts of energy (about 3% of global electricity supply) and rely on magnetization-based hard disk drives with limited storage capacity (up

to 2 TB per disk) and lifespan (three to five years). Laser-enabled optical data storage is a promising and cost-effective alternative for meeting this unprecedented demand. However, the diffractive nature of light has limited the size to which bits can be scaled, and as a result, the storage capacity of optical disks.

Researchers at USST, RMIT and NUS have now overcome this limitation by using earth-rich lanthanide-doped upconversion nanoparticles and graphene oxide flakes. This unique material platform enables low-power optical writing nanoscale information bits.

A much-improved data density can be achieved for an estimated storage capacity of 700 TB on a 12-cm optical disk, comparable to a storage capacity of 28,000 Blu-ray disks. Furthermore, the technology uses inexpensive continuous-wave lasers, reducing operating costs compared to traditional optical writing techniques using expensive and bulky pulsed lasers.

This technology also offers the potential for optical lithography of nanostructures in carbon-based chips under development for next-generation nanophotonic devices.

The technology uses a new nanocomposite material that combines graphene oxide flakes with upconversion nanoparticles.

Graphene oxide can be seen as a single layer of graphite with different oxygen groups. Reducing graphene oxide by eliminating these oxygen groups produces a material called reduced graphene oxide, which has similar properties to graphene.

Sub-diffraction information bits have been written in the nanocomposite using upconversion nanoparticles to reduce graphene oxide locally upon engineered illumination. The reduction of graphene oxide was induced by high-energy quanta generated in the excited upconversion nanoparticles through a process of resonance energy transfer.

The researchers chose upconversion nanoparticles because they enable efficient sub-diffraction optical writing using low laser beam intensity, resulting in low energy consumption and long lifetime of optical devices.

G Read and Translate

The electric car revolution

Electric vehicles have arrived. With technology led by Tesla, and all of the world's major car manufacturers following along behind, electric vehicles are now a common sight on the roads of most developed countries. Yet the situation in less developed countries is rather different; the only African country to have started the change to electric vehicles is South Africa and even there, electric vehicle sales still account for less than 1% of the total. In South America, the situation is better, with all Latin American countries but South Africa beginning the move towards electric vehicles, particularly Colombia which, in 2020, had a third of the continent's total electric car fleet. In India the government is promoting the purchase of electric vehicles with tax exemptions and other incentives. So electric cars have arrived, and their share of the market is increasing almost worldwide.

Does this mean, therefore, that the world is on track to phase out the use of petrol-driven vehicles in less than thirty years? And does it mean that electric vehicles are the sustainable solution to our transport needs for the second half of the century? Unfortunately, to the disappointment of some people, the answer to both of these questions has to be "no". The massive development of electric vehicles can only be possible if two conditions are met. Firstly the expansion of electric vehicle manufacturing is dependent on the fragile ability of manufacturers to source vastly increased quantities of vital components and elements without which electric vehicles cannot operate; these include lithium, cobalt and "rare earths" such as neodymium and tantalum, as well as silicon

chips which have already been in short supply since 2020. Secondly, few countries currently have electricity grids that are anywhere near being able to cope with the huge increase in demand for electricity that will accompany any rapid growth in electric vehicle ownership. Without adequate supplies of all the vital ingredients of electric motors and batteries, or without power supplies that are able to provide the electricity required to recharge millions of electric batteries every day (as well as supplying the current we need for everything else, such as lighting, heating, trains and electric devices), the electric car revolution will run up against insoluble problems in all but the most developed countries.

Governments and vehicle manufacturers are fully aware of these issues, but the consensus among policy-makers seems to be that somehow technology will come up with the answers, as it often has in the past. Analysts also predict that changing social attitudes and environmental awareness will lead to a reduction in private vehicle use and a fall in the numbers of vehicles on the roads. This prediction is likely to be right, though not necessarily for those reasons alone; any shortage of essential components will force up the cost of electric vehicles, and any shortage of battery recharging facilities or capacity will discourage people from buying electric vehicles, leading to a fall in the number of vehicles on the roads. Ultimately the success of the transition to electric powered vehicles will depend on advances in technology in three fields; the weight of batteries, the amount of power that they can produce, and the speed at which they can be recharged or exchanged.

H Which of these statements are true? Correct the false ones

1. Analysts predict that changing social attitudes and environmental awareness will not lead to a reduction in private vehicle use and a fall in the numbers of vehicles on the roads.
2. Electric vehicles are the sustainable solution to our transport needs.

3. In South Africa electric vehicle sales still account for less than 1% of the total.

4. Columbia which, in 2020 had a third of the continent's total electric car fleet.

5. The success of the transition to electric powered vehicles will not depend on advances in technology in three fields; the weight of batteries, the amount of power that they can produce, and the speed at which they can be recharged or exchanged.

Варіант 6

A Complete the sentences using an appropriate form of the verb in brackets.

1. They (begin) to study this phenomenon before it became widely known.

2. It is a well-known fact that Ukraine (cooperate) with all European countries.

3. The Institute of Geophysics currently (to carry out) the research into the structure of these planets.

4. Our scientific contacts with European countries (grow) very quickly in the first decade of the 20th century.

5. On the whole, the scientific cooperation between these countries (extend) to many areas of human activities.

6. The speaker just (to mention) the role of genetics in the development of medical sciences.

7. In the seventeenth century learned societies (organize) in England and France.

8. Phosphorus (to catch) fire easily and (to glow) in the dark.

9. She (read) this book the whole evening yesterday.
10. This problem (to solve) in the near future.

B Put the verbs in brackets into the correct form.

1. If the global economy (experience) another major recession, it can take years to recover to pre-recession levels of growth.
2. If inflation (rise) too quickly, the central bank might need to increase interest rates to prevent the economy from overheating.
3. If the company (fail) to adapt to new technologies, it will struggle to compete in the global market.
4. If the company (invest) in renewable energy sources earlier, it could have saved money on energy costs in the long run.
5. If I (have) more experience with coding, I could develop my own app.

C Make sentences into reported speech.

1. He asked the operator, ‘Do you have to learn a new software program?’
2. They asked the Marketing Manager, ‘When will the new product be launched?’
3. They asked him, ‘How often do you travel abroad?’
4. He said to the boss, ‘If you don’t give me a pay rise, I’ll resign’
5. The Office Manager said to the clerk, ‘Send the letter immediately!’

D Choose the right variant (a, b, c or d) to fill in the gaps.

1. The engineers _____ use machine learning algorithms to predict future outcomes and optimize decision-making processes in the upcoming project.

- a. will
- b. are
- c. have
- d. had

2. Isobutylene is _____ widely now for the production of synthetic rubber.

- a. using
- b. used
- c. use
- d. to use

3. The Federal Reserve _____ interest rates last month to curb inflationary pressures.

- a. raised
- b. raises
- c. has raised
- d. had raised

4. Over the next few years, cloud computing _____ even more popular, allowing users to store and access data remotely.

- a. becomes
- b. became
- c. will become
- d. become

5. IT professionals _____ about the dangers of cyber-attacks for years, and many companies have invested in cybersecurity measures as a result.

- a. warn
- b. have been warning
- c. will warn
- d. warned

6. The computer virus that infected the company's network last week _____ quickly identified and removed by IT professionals.
- was
 - is
 - has been
 - will be
7. The process of vulcanization _____ in 1834.
- was discovered
 - discovered
 - discovers
 - to discover

E Change the words in the brackets to complete the sentences.

- In the race between production of radioactivity and production of means of ..., the second may well be the (to protect, to win).
- The biosphere is considered to be a ... phenomenon of a truly cosmic scope (planet).
- Many artificial substances are ... to the biosphere (to know).
- The ... of their results show that they were obtained using different experimental techniques, (to compare).
- Classical Greeks denoted the numbers 238 by (to write) three letter symbols adjacent to each other.

F Write 10 special questions based on the following text and translate them. Give your own answers and translate them.

The main problems of global ecology

In the 21st century humanity has fully felt and realized the global ecological crisis, which indicates the anthropogenic poisoning of our planet.

Global environmental pollution arose due to the following interrelated reasons: the steady growth of the global population and a sharp increase in the consumption of various energy sources as a result of the scientific and technological revolution.

Every year, more than 20 million hectares of forests are destroyed on the planet, which is the area of Romania or Great Britain. As a result of soil degradation, 6-7 million hectares of land disappear from the world agricultural cycle every year, and this is the territory of Lithuania or Latvia. In addition, about 6 million hectares are covered by desertification processes every year. Solid production waste is measured in several tens of billions of tons, and the total global volume of wastewater has exceeded 1,800 km³. About 3.5 million tons of oil and petroleum products enter the world ocean annually, 60 million tons of aerosols, 100 million tons of sulfur dioxide, 70 million tons of nitrogen oxide, 175 million tons of carbon, 22 billion tons of carbon dioxide enter the Earth's atmosphere. This leads to the spread of acid precipitation and the strengthening of the greenhouse effect. The most dangerous environmental pollutants include the following inorganic and organic substances: radionuclides, heavy metals (mercury, cadmium, lead, zinc, etc.), polychlorinated biphenyls, polyaromatic carbohydrates, especially benzo(a)pyrene, dioxane, the constant action of which causes serious disruptions of activity basic vital functions of the body. Apparently, man crossed the permissible ecological limit of action on all components of the biosphere, which endangered the existence of modern civilization.

Developed countries bear the main responsibility for pollution of the natural environment and depletion of non-renewable resources. According to the Intergovernmental Agency on Climate Change, 74% of carbon emissions into the atmosphere are carried out by developed countries, and only 26% by developing countries. Per capita in developed countries, this indicator is ten

times higher than in developing countries. Therefore, in order to overcome the ecological crisis, it is necessary to introduce restrictions on the amount of pollution of the natural environment.

Our civilization is on the threshold of important decisions, when humanity must look for opportunities to preserve the future of our planet and implement them. The signing of the Kyoto Protocol by the governments of many countries confirms the determination to oppose global warming. After the signing of the Kyoto Protocol, many countries realized that it is necessary to reduce the consumption of fossil fuels.

The intensification of agriculture, the increase of man-made load on land resources, the uncontrolled use of chemicals in conditions of low technological culture and other influences lead to the deterioration of the quality of soils and their fertility. The main reason is that intensive agricultural technologies have come into conflict with the functioning of ecosystems, disrupting the natural cycle of substances and energy in them. Soil contamination with chemical and biological components, including radionuclides, heavy metals, pesticides, and pathogens of infectious diseases, are the most harmful to the natural environment. In places where industrial emissions fall, natural and cultural biocenoses degrade, the physicochemical properties and biological activity of soils deteriorate, their erosion increases, a new extremely dangerous phenomenon of acidification of chernozems appears, and crop yields decrease.

Life on the planet depends on a temperature difference of just a few degrees Celsius. Even small changes in climate can have a tragic effect on human habitats.

G Read and Translate

Mardi Gras

Mardi Gras, meaning literally "Fat Tuesday" was first celebrated in Louisiana by French colonists in the eighteenth century. It was, in those days, a day of feasting before the start of *Lent*, the 40-day period leading up to Easter. As the last "normal" day before the austerity of Lent, "fat Tuesday" was a day to make the most of, a day of carnivals, eating, drinking and revelry. It has remained a day of carnival ever since; but the original French celebrations are just a small part of today's festivities.

Mardi Gras, New Orleans style, owes as much to Afro-Caribbean customs and the Latin American carnival tradition as it does to the French colonists who established it in their new city. The Mardi Gras celebrations actually last for several weeks. About a month before the main carnival, a season of elaborate balls and parties begins: the official Mardi Gras program is published, and shops start selling the very sweet and colorful "King Cake", a delicacy that can only be found during this holiday season. In other parts of Louisiana, the first Mardi Gras parades actually take place three to four weeks before the big carnival in New Orleans, and even in the city itself, smaller parades begin two weeks before the big day.

My first Mardi Gras party took place in a friend's apartment in New Orleans a few days before the parade. The apartment was decorated out in the season's traditional colors of green, gold and purple; the hi-fi system pounded out carnival music, while the guests danced, talked, and ate King Cake, washed down with "Blackened Voodoo Beer", another specialty brewed in a local brewery. On Fat Tuesday itself, I joined the hundreds of thousands of local people and visitors, to watch the processions wind their way through the streets of New Orleans. The processions are organized by groups called "Krewes", which each have mythological or historic names, such as Proteus, Endemion, or Bacchus. The one I liked best was Zulu, a parade organized by members of the city's black community, resplendent with its colorful ornate floats and costumes

based on African themes. Perhaps the most astonishing aspect of Zulu and other parades was the "throws". As the floats move slowly through the crowds, tradition has it that those on them should throw all kinds of trinkets into the crowd — plastic necklaces, engraved plastic cups, plastic medallions (a coveted prize) and other souvenirs. Most parade-goers do all they can to catch these materially worthless items, and I found myself quickly caught up in the frenzy, scraping on the sidewalk among the surging spectators to proudly pick up my plastic prize. In the heat of the moment, it's hard not to be caught up in the madness of this ritual, in spite of the worthlessness of the prizes! Traditionally, people in New Orleans use the "throw cups" they pick up, and decorate their cars or homes with the other souvenirs they take home.

As a Yankee spending my first Mardi Gras in New Orleans, however, I made some mistakes in planning my time. There is so much going on at Carnival time, that you can't see everything, and I was disappointed not to see more of the city's famous Dixieland jazz bands parading through the streets, but obviously I was often in the wrong place at the wrong time. After a year, I know that I still have a lot to learn about the customs, cultures and traditions of Mardi Gras in New Orleans. This year, I'll try and restrain myself during the throws, so that I won't come home with a bagful of plastic objects that I simply have to recycle. I'll let someone else have that pleasure!

H Which of these statements are true? Correct the false ones

1. Mardi Gras, meaning literally "Fat Tuesday" was first celebrated in Louisiana by Spanish colonists in the eighteenth century.
2. "Fat Tuesday" was a day to make the most of, a day of carnivals, eating, drinking and revelry.
3. The official Mardi Gras program is not published.

4. The original French celebrations are just a big part of today's festivities.

5. Mardi Gras, New Orleans style, owes as much to Afro-Caribbean customs and the Latin American carnival tradition as it does to the French colonists who established it in their new city.

Вариант 7

A Complete the sentences using an appropriate form of the verb in brackets.

1. In scientific monographs much space often (devote) to experimental work.

2. They just (to invite) to participate in the work of a seminar on some urgent problems of biophysics.

3. Fertilizers containing phosphates (to use) widely in agriculture.

4. Don't switch on the light. The experiment (to carry out) in complete darkness.

5. These data (to obtain) before the experiment began.

6. The fact that atom has a nucleus in its center, which is positively charged, (to discuss) by firnest Rutherford in 1911.

7. Some time ago they (discover) a very interesting phenomenon

8. This assumption yet (not verify).

9. Today this compound widely (use) for the production of synthetic rubber.

10. We (to discuss) this problem for two years but still cannot find the solution.

B Put the verbs in brackets into the correct form.

1. If inflation (rise) too quickly, the central bank might need to increase interest rates to prevent the economy from overheating.

2. If we had invested in better data analytics tools earlier, we (avoid) many of our past mistakes.

3. If we (not implement) more cybersecurity measures, we'll be vulnerable to a data breach.

4. If I had known about this software earlier, I (recommend) it to my colleagues.

5. If the company (fail) to adapt to new technologies, it will struggle to compete in the global market.

C Make sentences into reported speech.

1. He asked the PR staff, 'Where do you intend to advertise?'

2. He said to me, 'Don't forget to sign the contract'

3. She said, 'It's important for you to be at the next staff meeting'.

4. I asked her, 'Are you prepared for your tomorrow's presentation?'

5. He said, 'I am sorry I have kept you waiting'.

D Choose the right variant (a, b, c or d) to fill in the gaps.

1. Machine learning algorithms _____ used to predict future outcomes and optimize decision-making processes in the upcoming project.

a. will be

b. is

c. was

d. has been

2. The data _____ analyzed using advanced statistical techniques to identify patterns and trends next week.

a. will be

- b. is
- c. are
- d. have been

3. The computer virus that infected the company's network last week _____ quickly identified and removed by IT professionals.

- a. was
- b. is
- c. has been
- d. will be

4. The process of vulcanization _____ in 1834.

- a. was discovered
- b. discovered
- c. discovers
- d. to discover

5. By the end of the decade, quantum computers _____ a reality, allowing for even more powerful computing capabilities.

- a. will have become
- b. became
- c. will become
- d. become

6. In recent years, some developed countries _____ protectionist policies to limit imports and promote domestic industries, which _____ to tensions in international trade relations.

- a. have implemented; has led
- b. implemented; led
- c. had implemented; had led
- d. will implement; will lead

7. The set pattern of today's biosphere is _____ unbalanced by man's current activity.

- a. being
- b. been
- c. be
- d. to be

E Change the words in the brackets to complete the sentences.

1. The zero of modern European system of counting had its (to originate) in India about 500 A. D.

2. Classical Greeks denoted the numbers 238 by (to write) three letter symbols adjacent to each other.

3. The biosphere is considered to be a ... phenomenon of a truly cosmic scope (planet).

4. Many artificial substances are ... to the biosphere (to know).

5. CO₂ is only a trace gas present in the atmosphere at a (concentrate) of about 0,3 per cent.

F Write 10 special questions based on the following text and translate them. Give your own answers and translate them.

What is the Internet?

The Internet is a global system of interconnected computer networks that use the standard *Internet protocol suite*, a set of communications protocols, to serve billions of users worldwide. The internet has reshaped and redefined most traditional communications media including telephone, music, film, and television. This has given birth to new services. Newspaper, book and other print publishing are adapting to Web site technology, or are reshaped into blogging and web feeds.

The Internet has enabled or accelerated new forms of human interactions through instant messaging, Internet forums, and social networking. Online shopping has boomed both for major retail outlets and small artisans and traders. Business-to-business and financial services on the Internet affect supply chains across entire industries.

The origins of the Internet reach back to research of the 1960s, commissioned by the United States government in collaboration with private commercial interests to build robust, fault-tolerant, and distributed computer networks. The commercialization of what was by the 1990s an international network resulted in its popularization and incorporation into virtually every aspect of modern human life. As of 2011, more than 2.1 billion people — nearly a third of Earth's population — use the services of the Internet

The **World Wide Web, the WWW** or **the Web** refers to an information space where documents and other web resources are identified by *Uniform Resource Locators* (URLs), interlinked by hypertext links, and can be accessed via the Internet. It was invented by the English scientist Tim Berners-Lee in 1989. He wrote the first web browser computer program in 1990. The World Wide Web has been central to the development of the Information Age and is the primary tool billions of people use to interact on the Internet.

Web pages are primarily text documents formatted and annotated with Hypertext Markup Language (HTML). In addition to formatted text, web pages may contain images, video, audio, and software components that are rendered in the user's web browser as coherent pages of multimedia content. Embedded hyperlinks permit users to navigate between web pages. Multiple web pages with a common domain name make up a website. Website content can largely be provided by the publisher or by users who contribute content online.

Recently, many people have criticized today's misuse of the web. The inventor of the World Wide Web, Tim Berners-Lee himself has warned of the

dangers of the Internet. According to him, the web has become a tool in the hand of the powerful to get what they want. For example, he warns that fake news is disseminated either to generate a lot of money or to attempt to manipulate people's opinions . Another worry was the gross invasion of privacy. Tim Berners-Lee is also concerned about governments' misuse of the Internet to collect personal data to manipulate or oppress people.

G Read and Translate

Recycling

Recycling can be defined as the process of converting waste materials into new materials and objects. It can save material and help lower greenhouse gas emissions. The aim of recycling is to avoid "conventional" waste disposal. It contributes to the prevention of the waste of potentially useful materials and reduces the consumption of fresh raw materials, thereby reducing: energy usage, air pollution (from incineration), and water pollution (from landfilling). This practice has been around throughout the history of mankind, with recorded advocates as far back as Plato in the fourth century BC.

Recycling is a key component of modern waste reduction and is the third component of the "Reduce, Reuse, and Recycle" waste hierarchy whose aim is to extract the maximum practical benefits from products and to generate the minimum amount of waste.

Recyclable materials include many kinds of glass, paper, and cardboard, metal, plastic, tires, textiles, and electronics. The composting or other reuse of biodegradable waste—such as food or garden waste—is also considered recycling. Materials to be recycled are either brought to a collection center or picked up from the curbside, then sorted, cleaned, and reprocessed into new materials destined for manufacturing.

In the strictest sense, recycling of a material would produce a fresh supply of the same material—for example, used office paper would be converted into new office paper. However, this is often difficult or too expensive (compared with producing the same product from raw materials or other sources), so "recycling" of many products or materials involves their *reuse* in producing different materials (for example, paperboard) instead. Another form of recycling is the salvage of certain materials from complex products, either due to their intrinsic value (such as lead from car batteries, or gold from circuit boards) or due to their hazardous nature (e.g., removal and reuse of mercury from thermometers and thermostats).

Much of the difficulty inherent in recycling comes from the fact that most products are not designed with recycling in mind. The concept of sustainable design aims to solve this problem. Now scientists suggest that every product (and all packaging they require) should have a complete "closed-loop" cycle mapped out for each component—a way in which every component will either return to the natural ecosystem through biodegradation or be recycled indefinitely.

H Which of these statements are true? Correct the false ones

1. Recycling is a modern practice to convert waste materials into new materials and objects.
2. Apart from recycling, there are other ways to reduce the consumption of fresh raw materials.
3. Sometimes, recycling can be expensive.
4. All manufactured products can be recyclable.
5. Another form of recycling is the salvage of certain materials from complex products.

Навчальне видання

Методичні вказівки
до виконання контрольних робіт з навчальної дисципліни «Іноземна мова»
для студентів 4 курсу економічних, комп'ютерних
та гуманітарних спеціальностей заочної форми навчання

Українською та англійською мовами

Відповідальний за випуск

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