

Київський національний університет імені Тараса Шевченка
Навчально-науковий Інститут філології
Кафедра іноземних мов математичних факультетів

Каленченко Олександр Олександрович

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Reviewers:

Iryna Letunovska, PhD in Philology, Associate Professor, Taras Shevchenko National University of Kyiv

Tetiana Nikolaieva, PhD in Philology, Associate Professor, Department of Foreign Philology, Kyiv National University of Culture and Arts

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of the Educational and Scientific Institute of Philology

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This textbook is intended for second- and third-year students majoring in Computer Science and related fields, such as Cybernetics. It aims to help learners acquire professional vocabulary and terminology necessary for understanding and interpreting digital phenomena, as well as to develop active professional vocabulary and enhance skills in describing and analyzing modern devices and digital technologies.

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Вступ

Шановні студенти та викладачі! Пропонований навчальний посібник з англійської мови «English for Computer Science» за напрямом ESP призначений для студентів спеціальності «Комп'ютерні науки» а також спеціалістів суміжних галузей кібернетики. Посібник надає широкі можливості для вивчення професійної лексики, що включає базовий термінологічний апарат, вирази і звороти, необхідні для номінації та інтерпретації явищ цифрового світу. Посібник сприятиме формуванню активного словника мовця, необхідного для точного опису та аналізу технічних характеристик і властивостей сучасних приладів та технологій.

Тематичний принцип структури посібника дозволяє вивчати професійно орієнтовані теми у порядку, бажаному для мовця, оскільки кожен юніт є завершеним розділом, у якому тема розкривається у різних видах навчальної активності: обговорення вступних тез і основоположних фактів, прямо пов'язаних із темою, читання авторської статті, вивчення ключової лексики та її закріплення у процесі виконання спеціально розроблених вправ. Кожен розділ посібника містить відео завдання, що надає можливості не лише коригування точної вимови та інтонації, а й занурення у професійно орієнтовану мовленнєву ситуацію.

Грамотичні вправи, які представлені у кожному розділі посібника як додаткові завдання, також сприятимуть розвитку комунікативних навичок спеціалістів, оскільки інтегровані у професійно-орієнтований та спеціалізований тематичний контекст комп'ютерних технологій. З урахуванням важливості письмової (текстової) комунікації у посібнику вміщено вправи для засвоєння письмових жанрів, актуальних для технічної сфери.

Окремі фрагменти посібника, що присвячені питанням історії розвитку Інтернету та технологій комунікації, дають можливість ретроспективного сприйняття еволюції явищ цифрового світу, акцентують на значущості технічних винаходів попередніх епох. У цих фрагментах представлено ряд проблемних і дилемних аспектів цифрової дійсності, способи їх розуміння та вирішення — задля позитивного впливу на формування технічного світогляду майбутнього спеціаліста.

Unit 1

Hackers and Cyber Threats

Task 1 Lead-in

Read and discuss the introductory statements. Do you agree or disagree with them? Add any relevant information you may have about the facts presented. Provide your comments on each statement.

1. The rapid growth of digital technologies has brought not only benefits but also serious challenges, including Cyber threats, data breaches, and hacking incidents. Hackers are often seen as the primary perpetrators operating anonymously and remaining invisible to the public.
2. Hackers may be less visible or tangible than traditional criminals, but they can be just as dangerous as robbers, burglars, and muggers.
3. While hacking has traditionally been considered illegal, ethical hacking has become a more accepted practice today. Many companies now hire white-hat hackers to test and strengthen their computer systems and networks.
4. White-hat hackers are usually well-paid. They earn a legal income by maintaining and improving security systems. They may hack into a system to identify vulnerabilities and prevent potential attacks.
5. According to traditional stereotypes, hackers are anonymous, wearing black hoodies and living in the shadows. Today, however, more white-hat hackers are becoming well-known figures, giving interviews to journalists.

Task 2 Reading

Read the article and translate the keywords in bold.

White hat hackers: who are they and how can they protect us from being hacked?

By Christopher Erasmus

The Telegraph, www.telegraph.co.uk

Tommy DeVoss (hacker **alias** dawgyg) was arrested by the FBI, who charged him with breaking into government and military computers. Mr DeVoss would serve two and a half years in a federal jail. He was 19 years old. Now 33, Mr DeVoss **is reflective on** his crimes, which he attributes to little more than a teenager's **wandering mind**, the thrill of power and a few bad choices.

However, ask anyone in the NHS if computer hacking amounts to childhood fun and you're likely to get a different response. Earlier this year the Wannacry attack struck computers across the world, including those of the NHS, **crippling systems** and services, costing £180,000 in special measures and putting operations and lives at risk. Such attacks are now part of the daily threat every organisation faces. As many as 46pc of companies suffered from a cyber attack or **breach** of their computer systems last year.

As we all move into a more open world, more **reliant on** connected technology and more **susceptible to** those who would exploit it, The Telegraph and Samsung Knox have created a two-part documentary series to ask who hackers are and how we can protect ourselves and those we care about.

A wake-up call

If hacking is something that many of us saw in the shadows behind the systems that run our lives, recent events have **put it firmly in the spotlight**. Shafi Ahmed, a pioneering surgeon working at St Bartholomew's Hospital, London and an early adopter of tech in health, recounts the day of the WannaCry hack: "It was emotional. There was frustration, confusion and anger. Who would do this to a hospital?" Mr Ahmed was in the process of delivering a difficult and emotional diagnosis to a patient when he realised he couldn't access their records. "I knew that what I needed to say would be hard for them to hear and then I couldn't tell them what was wrong with them." He describes the attack on the NHS as "**a wake-up call** for every

business owner” and a realisation that for all of the tremendous advances in technology in a sector such as healthcare, security must never be ignored.

They could be anyone

Perhaps one reason we don’t always give cyber security enough respect is its **faceless protagonists**, who are less brutal and **substantive** than bank thieves or arsonists, though no less destructive. “When I picture a hacker I see a face covered by a mask,” says Mr Ahmed. “Hackers by their nature are **anonymous**. They could be anyone, anywhere.” While they remain secretive, hackers are increasingly successful. The truth is that it’s never been a better time to be a hacker. From fridges to fitness trackers, never have more devices tracked more information about us, and been ripe for exploitation.

“There’s so many more things now that you can hack – your phone has everything about you,” says Mr DeVoss. An exciting prospect for a hacker, for sure, but one that’s personally **unappealing**. “The stakes are a lot higher now,” he says. “If I got caught again doing it illegally, it’s life in prison.”

Mr DeVoss now wants to provide a good life for his daughter, Skylee, although he still describes hacking as “an addiction”. He has found a solution in **bug bounties**, where **corporate entities** open their systems to the stress test of *an attempted hack*. Those that break through and identify a weakness get the prize. Everybody wins in this **mock crime**: the hacker still gets their buzz, the business **tightens its security** and nobody *has their data stolen*. Mr DeVoss recently raised his profile through a \$9,000 bug bounty offered by Yahoo!. On receiving his report the company had the issue analysed and a solution planned within an hour, and had the end point taken down and the compromised Secret Keys revoked less than an hour later. Few companies are **so security-savvy**, explains Mr DeVoss, but as such services of “white hat” hackers become more well known, he hopes that will change.

“I couldn’t quit hacking, so I had to find a way to use it to help companies protect themselves and their customers,” says Mr DeVoss. “I wanted to be part of the solution, and to make hacking a part of that.” For Mr DeVoss, it was the realisation of having something to lose that has helped cement a **newfound appreciation** for life outside his hacker alias. “When I came out I knew I needed to change,” he admits. “Becoming a father was a part of that; I understood that feeling of having something to protect.”

Protection and care. Mahiben Maruthappu, a president of start-up company Cera and Forbes 30-under-30 **alumnus** is a **proponent of** technology but **sanguine about**

the future. “Hackers affecting work and life isn’t something that’s going to happen in a few years’ time, it’s already happened,” he says. “And everybody has something they need protecting.” [1]

Task 3 Vocabulary

A. Find the keywords in the text that match the definitions below.

1. A nickname or pseudonym used by a hacker to remain anonymous on the Internet. 2. Vulnerable to anyone’s influence, hacking activity, or intrusion. 3. A warning signal that indicates a dangerous situation. 4. Unattractive. 5. A person who is thinking about his / her actions. 6. Invisible and intangible. 7. To destroy a computer system, or significantly limit its technical functions. 8. Unfocused, without a clear direction. 9. Dependent on something because of its specific qualities or technical characteristics. 10. Anonymous, no name, photo, profile, or any identifying information. 11. The process of attacking a computer system to find security vulnerabilities. 12. The process of simulation of illegal actions carried out under official control. 13. An experienced and skillful security professional. 14. To increase security.

Task 4 True or False

Read the statements below and indicate whether they are true or false. If the statement is false, find the correct information in the text.

1. Tommy de Voss has become a successful bug bounty hunter and has no regrets about his younger years.
2. Interconnected devices and technologies create a conducive environment for hacking attacks.
3. According to the statistics presented in the text, more than half of companies become easy targets for hacker attacks every year.
4. Shafi Ahmed, an experienced doctor at St. Bartholomew’s Hospital, reacted calmly to the WannaCry hack.
5. The misconception that hackers are less dangerous than ordinary thieves stems from their anonymity and invisibility to Internet users.
6. Tommy works with executives of large companies who hire him to simulate cybercrimes.
7. For Tommy de Voss, bug bounty hacking provides a compromise between hacking and legality.
8. Mahiben Maruthappu is optimistic about the future and relies on anti-hacking technologies.

Task 5 Answer the question

1. Who is Tommy de Voss? What happened to him in 2002? What does he think about his criminal background?
2. How much damage did the WannaCry attack cause? How many companies suffered cyberattacks the year before?
3. How is Cybersecurity presented in today's open world, where interconnected technologies play such an important role?
4. Why does Shafi Ahmed describe the cyberattack at St Bartholomew's Hospital as a wake-up call?
5. Why do users, according to the text, perceive hackers as less dangerous than real thieves?
6. How can bug bounty hacking improve a company's security?
7. Did Tommy understand another purpose of hacking and protection? What changed his life?

Task 6 Keywords and expressions

A. Fill in the gaps in sentences 1 — 8 using the keywords and expressions a — j.

a) faceless protagonists, b) vulnerability, c) security-savvy, d) pundits, e) improve, f) data, g) damage, h) spotlight, i) reflects on, j) sanguine

1. Now retired, Ed _____ his formative years when he was young and didn't think about a career as a famous scientist.
2. The Software Testing Department acknowledged the _____ of interconnected platforms. Recent tests have put it firmly in the _____.
3. An excessive number of hacker attacks can _____ a computer system. It creates a real threat to sensitive information.
4. Today, white-hat hackers are not satisfied with their status as _____ in real life.
5. Bug bounty hackers attack computer systems to find vulnerabilities and _____ security.
6. Every company must have _____ professionals to provide technical maintenance to its computer systems.
7. Our _____ were stolen because the computer security had not been updated on time.

8. _____ have expressed dissatisfaction with the quality of Cyber protection, but white-hat hackers remain _____ about the future. They know how to mitigate the negative consequences of hacker attacks.

B. Choose one suitable word in italics.

1. The inability to predict or prevent a hacker attack makes Howard extremely *worry / worrying / worried*. In his research he reflects on the harmful impact of malicious software.
2. Bug bounty hacking has helped him achieve popularity. For a long time, Howard had been a *lost face / faceless* protagonist on the Internet.
3. Despite the growing popularity of bug bounty hacking, only a few security-*save / savvy / saving* experts in the city know how to maintain a strong security posture.
4. All illegal activities on the Internet may appear less *harmful / harmed* than those committed in the real world.
5. An unexpected Cyber intrusion that occurred two days ago became a wake-up *alarm / call / sign* for the company.
6. The data *gap / breach / tap* may have been caused by a system failure in the backup databases.
7. John Brown has created a new application with a visually *appealing / good-looking* user interface.

Task 7 Video Watching

A. Find the video on YouTube «The teenage millionaire hacker» // BBC News. <https://m.youtube.com/watch?v=J4ElhxkLUk8&pp=ygUTRGF3Z3lnIGhhY2tldG9yeQ%3D%3D>

Translate the keywords before watching the video:

Security flaws in code, legit, bug bounty hacking.

B. Watch the video and say what is true or false due to the statements given below:

1. Santi is an amateur hacker who practices hacking as a hobby.
2. He has become wealthy by working with the most famous websites as a bug bounty hunter.

3. Santi gets rewards by fixing bugs to make the Internet safer.
4. He works in a specialized center in an urban residence with good conditions and safety.
5. He doesn't look like a typical movie hacker with sunglasses and a hoodie.
6. Once upon a time, Santi wanted to use his skills for illegal action, but a bug bounty saved him.
7. He says that money is not important to him at all.
8. Santi has returned to his native city, Rio de Janeiro, earning 14 times more than the average Brazilian.
9. Santi has a dream: he wants to win a race in sports car racing.

Use of English

Task 8 Verb Tenses

Use the correct forms of the verbs in brackets to complete the sentences.

William 1) _____ (always, to want) to become a cyber specialist. When he 2) _____ (to finish) school, he decided to enter university to study Cyber security. He 3) _____ (to study) for five years until he 4) _____ (to offer) the position of security consultant at the National Museum's Digital Gallery. He 5) _____ (to organize) exhibitions on the history of technical achievements for many years now. Since then, William 6) _____ (to meet) many interesting people who 7) _____ (to become) his friends.

Everything was going fine as they worked as one team. Once upon a time, the Digital Gallery faced financial problems. They 8) _____ (not, to be able, to find) a key sponsor for the exhibition of old mobile phone models. Things 9) _____ (to start) looking up for them when they 10) _____ (to receive) an invitation from Mr. George Sailor, a philanthropist who 11) _____ (to establish) a charity center for local scientists. Currently, with Mr. George's support, William and his colleagues 12) _____ (to manage) the mobile phone exhibition for several months.

During this time, over 2000 people 13) _____ (to visit) the exhibition, which is the highest attendance on record. Last week at the exhibition, William 14) _____ (to present) his first book dedicated to the history of mobile phones. He 15) _____ (already, to tell) us about his book, so we were ready to ask

professional questions. This year, the book 16) _____ (to become) an official guidebook for the exhibition.

Task 9 Word Formation

Use the words from the list below and create nouns to fill in the gaps.

1 important, 2 to rely on, 3 anonymous, 4 to appreciate, 5 team, 6 susceptible, 7 to maintain

The _____ of Cybersecurity is the subject of our scientific studies. We identify the most common problems and propose alternative solutions to improve the security of interconnected devices. Our experts assume that 2 _____ antivirus software can generate a false sense of security; therefore, practicing safe online behavior should remain a top priority. All Cyber specialists emphasize that 3 _____ is a defining trait of hackers, and we shouldn't forget it. Companies must improve their security and inform all employees about Cyber threats and effective countermeasures. According to the survey results presented in our research, the most rewarding thing is the 4 _____ of effective team work expressed by the head manager during the staff meeting. One of the most common problems in Cybersecurity is the 5 _____ of software to computer viruses, which can be mitigated through regular technical 6 _____ and software updates.

Task 10 Quantifiers and determiners

Use the quantifiers from the list below to fill in the gaps.

Part 1

either, few, most of, little, neither, several (x2)

My colleagues in the tech laboratory experimentally tested 1 ___ devices, but I didn't participate at all during this period because I've spent 2 ___ my time on a business trip. We had to find money to develop the project, but there was very 3 ___ time to find a generous sponsor who could support us. For this reason, there were 4 ___ alternatives. We didn't know how to resolve the financial problems, but our supervisor managed to find 5 ___ brilliant solutions. While we were discussing how to process mass media quotations and improve AI language patterns, he proposed launching a tech video blog that could advertise our innovations. The public would be better informed, and we could sell our devices to industrial partners. After the meeting, we had some time for a chat to discuss details of the project. We agreed to

launch both a video blog and a website. Moreover, our manager offered me the position of chief editor. I would have to curate both the vlog and the website, but 6 ___ of these two roles suited me. I didn't like managerial work, I wanted to be a creative developer. Recently, I had the opportunity to choose between two positions: web designer and app developer. I politely said that I would choose 7 ___ of those positions, and then I became responsible for the video-editing section.

Part 2

a lot of, all, every, everyone, many, most, several (x2)

We have 10 _____ work to do. 11 _____ day, our team solves editing and web design problems. We spent 12 _____ weeks creating proprietary fonts and an eye-catching layout for the website. Many people appreciate the web design and the quality of the website's service. Then, an unexpected data leak occurred, and we faced 13 _____ problems. I decided to invite 14 _____ professional bug bounty hunters to test and strengthen our security system. They examined every part of the system and found 15 _____ of the bugs. They plan to conduct a follow-up check to identify any remaining failures and errors. With technical improvements, things have been getting better. 16 _____ enjoys being part of the team. We successfully managed the website and released the first video. I congratulated 17 _____ workers in the company on their professional achievements.

Unit 2 Career in Cyber sphere:

AI Engineering

Task 1 Lead-in

Read and discuss the introductory statements. Do you agree or disagree with them? Add any relevant information you may have about the facts presented. Provide your comments on each statement.

1. Your future career is part of your identity. You often discuss professional interests and opportunities instead of talking about hobbies.
2. You can find the ideal job by focusing on two main factors: a decent income and a genuine passion for your work. Other factors, such as office location, work environment, and relationships with colleagues are less important.
3. Many of the most successful careers begin as passionate hobbies during the teenage years.
4. Highly qualified professionals do not see a clear boundary between work and personal life, sometimes choosing to stay late at the office — even on Fridays.
5. The experience of a seasoned professional is often more valuable than the enthusiasm of a young worker.

Task 2 Reading

A. Before reading the text, give your own definition of a successful career. Describe its main components — such as income, workplace environment, opportunities for professional development.

B. Read the text and translate the keywords in bold.

Why Information Technology is a Good Career Choice

The text is taken from: floridacareercollege.edu

Information Technology or **more commonly known** as I.T. is the most popular career and **the fastest growing industry** in the world. There are several success stories about people who chose this field for a career and are now **on top of their game**. But what is it about I.T. that makes it such **a lucrative career choice** for **up and coming** professionals. Here are a few reasons why people who choose Information Technology are successful in their business life:

LOW COST OF EDUCATION

The biggest advantage of choosing information technology for a career is that it has a very low cost of education as compared to many other career choices. You don't need a 4-year degree to become an I.T. professional. Instead, you can get quick training to be certified in specific areas of Information Technology. This way you save huge amounts of money that you may have otherwise spent on years of **college tuition**. The more knowledge and certifications you acquire the more you'll **advance in your career**.

FASTEST CHANGING INDUSTRY

The Information Technology industry operates at a speed much faster than any other industry and for this reason, there's always a significant demand for highly-skilled workers. With the innovations in cloud computing, big data, and cyber security an **aspiring** I.T. professional has many **avenues** to **pursue** and grow from. An I.T. professional never stops learning, and must always stay on top of the latest technological trends in order to be successful in the field. The more training and knowledge the I.T. professional has the more **employable** he or she will be.

BETTER INCOME

It is a well-known fact that Information Technology professionals are paid well, compared to other professionals. An I.T. professional with the right mix of certifications and experience can find **a permanent position** in either the public or private sector. Recently, many companies have been extensively hiring experts in cloud computing, cyber security, and network security to help **enhance** their current systems. Many I.T. jobs provide **great career advancement opportunities** for a **dedicated** and hardworking I.T. **professional**. [2]

Task 3 Vocabulary

A. Find the keywords in the text that match the definitions below.

1 a technological realm that is developing too rapidly; 2 a financially promising career path; 3 to achieve the highest level of professional qualification; 4 promising, prospective employees; 5 money paid for studying (at university, college, etc.); 6 to achieve significant progress in your career; 7 to be able to find a well-paid job; 8. ways or opportunities; 9 a steady job with the same position; 10 a worker who likes his job, profession and company and doesn't plan to change them.

Task 4 True or False

Read the statements below and indicate whether each one is true or false. If a statement is false, provide the correct information based on the text.

1. Decent income, low-cost education and ongoing skill development are reasons why Information Technology is a lucrative career choice.
2. Information technology as a career choice correlates with high costs of education and practical training.
3. You have to finish university to apply for a job in the IT industry. Otherwise, you will have no opportunity to work in IT.
4. Everything in the IT industry changes rapidly, so an IT specialist must constantly learn new things.
5. Not all IT positions offer the opportunities for professional development. Getting a good position in the IT industry can be challenging.

Task 5 Answer the questions

1. How is the IT industry characterized in the text (from Task 2)? What are the main benefits of choosing a career in the IT Industry?
2. Is getting an education in the field of IT currently difficult or inaccessible? Which is better: a university degree or specialized IT courses?
3. Do you see more advantages or disadvantages in IT as the fastest-changing industry today?
4. What do you need to apply for a job in IT? Which IT professions are the most popular?
5. What motivates you most in your IT career: technical achievements, a good income, or the experience of living and working in the digital world?

Task 6 Video Watching

A. Find the video on YouTube “AI Engineers are in high demand – but what is the job really like?” // CNBC International.

[https://m.youtube.com/watch?](https://m.youtube.com/watch?v=Xl6O8jS1Hho&pp=ygUVQ2FyZWVyIGluIEN5YmVybmV0aWNz0gcJCdgAo7VqN5tD)

[v=Xl6O8jS1Hho&pp=ygUVQ2FyZWVyIGluIEN5YmVybmV0aWNz0gcJCdgAo7VqN5tD](https://m.youtube.com/watch?v=Xl6O8jS1Hho&pp=ygUVQ2FyZWVyIGluIEN5YmVybmV0aWNz0gcJCdgAo7VqN5tD)

Translate the keywords before watching the video.

World’s most tech in-demand job, fighting scam and fraud, to create from scratch, potential fraudsters, unleashed, apprenticeship program, mid career switch, risk assessment, parsing, proper signatory.

B. Watch the video and answer the questions:

1. What problems are being solved with the help of AI today? What does the presenter say at the beginning of the video?
2. What helps manage potential fraud and risks? What does the expert say about fake identities?
3. What game do the engineers use to achieve their security goals? What tools or methods do they use to improve incident response processes? What is an LLM? What is it used for?
4. Is the Gen AI market a lucrative realm? What does the presenter say about it?
5. What linguistic challenges does AI typically face? What is the main task of prompt engineering?

6. What do experts say about making a mid-career switch into the AI industry? What do other people in the video say about their career switch experience?
7. What statistics does the speaker present about the scam and its victims? What is the role of AI-based risk assessment?
8. How do engineers anticipate future development of AI? What is the role of parsing? How does AI cope with human languages?

Use of English

Task 7 Idioms and expressions. Meaning

Part 1. Match the words and expressions a – h with the definitions 1 – 8.

a) a drawback; b) an accomplished (web designer); c) a competent specialist; d) to learn the ropes; e) to have a natural flair for; f) to take advantage of opportunities; g) on a steep learning curve; h) a whizzkid;

1. A worker who is skilled and meets the basic requirements of a particular profession or job.
2. A situation in which you are getting used to new working conditions, rules, norms, and principles in a particular workplace.
3. A negative aspect of work, gadgets, or technology.
4. A situation where you have to learn many skills and acquire a lot of knowledge and experience in a short period.
5. To have an instinctive talent for doing something, to be able to do something effortlessly and elegantly.
6. To use circumstances effectively and not miss any chance to achieve positive results.
7. A professionally educated and trained individual; a reliable specialist (for example, in web design).
8. A person who is skilled and talented in a particular area and knows how to act professionally in the workplace.

Part 2. Match the words and expressions a – h with the definitions 1 – 8.

a) to go with your gut feeling, b) to be born with innate talent, c) to have a profound effect on you, d) to be academically/artistically gifted, e) to have a head for numbers, f) an old hand, g) to have an eye for detail, h) to find your feet.

1. An experienced person who has worked in the same place for a long time and possesses the practical skills to resolve any professional issue.
2. To rely on your intuition in a difficult situation when rational thinking may not be effective.
3. To become familiar with a new workplace or successfully adapt to a particular professional direction.
4. To be influenced by someone who has always been an iconic figure to you, or to be impacted by views, theories, circumstances, or experiences.
5. To have a natural ability to deal with calculations, computations, algorithms, etc.
6. To be good at noticing visual elements.
7. To have an innate ability for academic or artistic work.
8. To be born with natural talent.

Task 8 Idioms and expressions. Practice

Fill in the gaps using the keywords and expressions given in each block of this task.

Part 1. a) it had a profound effect on me, b) an accomplished, c) on a steep learning curve, d) competent

1. My elder brother has become _____ robotics engineer, having graduated from university at the age of 21.
2. The trainee is underqualified, so we need more _____ specialists.
3. When I got into trouble for the first time at work, _____.
4. After working for some time, Jim decided to change his profession and take up a new job. He is _____ as he tries to adjust to being a software engineer.

Part 2. a) numbers, b) photography, c) academically gifted, d) drawback, e) found his feet, f) advantage

1. Anthony's strong qualifications and professional background enabled him to become part of a highly skilled team. He _____ in the quality assurance department.
2. In his new job, Jim took _____ of the opportunity to develop his graphic design skills under the guidance of top-class professionals.
3. The Computer Science University attracts _____ young people, offering comfortable conditions for personal growth and development.

4. One _____ of participating in an international IT project is the need to speak several foreign languages when communicating with scientists from different countries.
5. Joshua has a head for _____; he is going to become a mathematician.
6. My sister Jenny has an eye for _____. She would be an ideal candidate for most types of web design jobs.

Part 3. a) go with your gut feeling, b) a seasoned expert, c) a whizkid, d) to learn the ropes, e) flaws

1. Before joining the tech-security project, Jeremy needs _____ of bug bounty hacking.
2. Do you notice any _____ in the design of the gadgets displayed in the tech gallery?
3. Our new colleague is skilled and quick-thinking — he is a _____.
4. Working with different types of cyber protection can be challenging, especially when choosing the right antivirus platform for multiple systems. If you are unsure, _____.
5. Emily is _____ in software updates, so all junior employees in the office should coordinate any innovations with her to avoid potential issues.

Part 4. a) a natural flair for, b) an innate talent for

1. Most of our employees have _____ creative work, so many of them take part in video game projects.
2. My uncle Jeremy didn't have _____ computer graphics, so he chose another sphere and achieved success as a system administrator.

Task 9. Expressions related to work, job, profession

Part 1. Complete the sentences using the keywords and expressions a – j.

a) learn the ropes of, b) go with your gut feeling, c) issues, d) challenges, e) seasoned, f) had a profound effect on, g) take advantage of the opportunity, h) a whizkid, i) to finally find my feet, j) drawback

1. All the young workers in the company respected Jeremy as a _____ professional and valued his opinion.

2. On a business trip, you should _____ to communicate with professionals in your field.
3. If you find any _____ with this device after testing, please let me know, and I will take them into account for further improvement.
4. The biggest _____ of most wearable gadgets is their short battery life.
5. We have high standards for newcomers, so be prepared to face _____ if you wish to join our team.
6. The accidental meeting with Apple top managers at the conference _____ junior developers.
7. It is not easy to choose an appropriate stylish font and a color palette in web design. If you don't know how to complete a creative task, _____.
8. Anyone who has completed an advanced training course, please help new employees _____ web design in our department.
9. After the first attempt, Christopher got this job! He is _____.
10. It took a grueling four months _____ in the Department of Wireless Communication Systems.

Part 2. Complete the sentences using the keywords and expressions

a) an innate talent for, b) gifted, c) overqualified, d) a competent specialist, e) a head for, f) a natural flair for, g) an eye for, h) accomplished

1. Chris Harrison has become an _____ AI developer since he began his career in our department.
2. This exam was very difficult; only mathematically _____ students were able to achieve a high grade.
3. It's a pleasure to work with someone as _____ as you. Thanks a lot!
4. The head developer in our department is _____ and deserves a promotion.
5. Jimmy has _____ numbers. He is the only one who will help us with this equation.
6. My sister has _____ detail. She can create an eye-catching layout without AI tools.
7. My neighbor Moris doesn't have _____ languages, but after living in Switzerland, he managed to pick up a few.
8. Children with _____ chess are invited to a specialized boarding school to study the art of playing chess. Some of them will become members of the national Olympic chess team.

Task 10 Future Forms

A. Complete the sentences of the dialogue using the Future Forms.

A: I think our company 1 ___ open a new branch abroad. We 2 ___ need to appoint a manager.

B: That sounds great — I didn't expect it! I 3 ___ call Michel to see if he's interested in taking on the role.

A: What 4 ___ (you, to do) on Friday?

B: I'm not sure yet. I 5 ___ go to the warehouse to check the equipment.

A: Don't worry — the box with the tools 6 ___ arrive at eleven. It's usually on time.

B: 7 ___ (You, to see) Mr. Antonio Morrison next week? He promised to help us with logistics.

B. Read the grammar rules and fill in the gaps in the sentences using the words in brackets.

Adverbs of probability *probably, definitely, certainly, obviously, etc.*, are used with Future Forms. In positive constructions we use the adverb in the middle of the construction. For example: I will probably take up this offer to visit an e-car factory if I have enough time. In negative constructions we use the adverb before the future form: We definitely won't succeed if don't launch a promotional campaign.

a) If we do not complete the project on time, we _____ (definitely, not, get) the prize; b) If I pass my university exams successfully, I _____ (probably, be able to) get a job abroad.

C. Other ways to talk about the future.

Fill in the gaps using the words given below.

On the verge of, on the brink of, determined, marked by, on the point of, is due to, likely(x2), a thing, a distant memory.

1. Online services are _____ collapse due to the rise in hacking attacks in our city. Programmers are making significant advancements in security services using bio-metric data.

2. I have always wanted to work in AI Engineering department. After a successful job interview, my dream is _____ becoming a reality.
3. With a significant breakthrough in tech development, all forms of Internet fraud are expected to become _____ of the past.
4. The next twenty years will be marked by rapid growth in the Cybersecurity sector. Digital technologies will make cyberspace a safer and user-friendly environment.
5. Many tech companies use workplace virtualization. The same is _____ to happen with organizations located on remote islands.
6. I was _____ butting into the conversation. I wanted to disprove the stereotypes about female web developers.
7. Mr. Forester _____ inform us about sweeping changes in our company. However, his tech strategy still needs improvement.
8. This book on hacker psychology is _____ to become a bestseller. The International Tech Committee has recently approved it.
9. Despite the challenges I am _____ to contribute technically to a project that has received little support.
10. By the end of the next decade, smart glasses and other advanced technologies will have made cross-cultural communication accessible to everyone. Language barriers and difficulties with text writing will be _____.

Unit 3

Cyber Security

Task 1 Lead-in

Read and discuss the introductory statements. Do you agree or disagree with them? Add any relevant information you may have about the facts presented, and provide your comments on each statement.

1. Internet security is a leading branch of computer science today. It is vitally important for individual internet users, communities and organizations.
2. The most dangerous cyber threats today include viruses, Trojan horses, DoS attacks, and other forms of malicious software. However, the most devastating threat may be psychological blackmail via phone or messaging platforms.
3. The continued development of internet security as a branch of computer science focuses not only on technical protection but also on psychological literacy, helping users resist negative influences online.
4. Internet security specialists will be in high demand in the foreseeable future, due to the growing need for technical protection. Internet security will help create a safer and more comfortable environment of interconnected devices.
5. One of the most promising cybersecurity strategies for the coming decade may involve limiting personal time spent online. Cybersecurity coaches will conduct training sessions to help individuals reduce their online presence, making them less vulnerable to hackers and other cyber threats.

Task 2 Reading

Read the text and translate the keywords in bold.

Internet security

Taken from: Wikipedia

The original text is shortened

Internet security is a branch of computer security specifically related to not only Internet, often involving browser security and the World Wide Web, but also network security as it applies to other applications or operating systems as a whole. Its objective is to establish rules and measures to use against attacks over the Internet. The Internet represents **an insecure channel** for exchanging information, which leads to a high risk of **intrusion** or **fraud**, such as phishing, online viruses, trojans, worms and more.

Many methods are used to protect the transfer of data, including **encryption** and **from-the-ground-up engineering**. The current focus is on prevention as much as on real time protection against well known and new threats.

Malicious software

An internet user can be tricked or forced into downloading software that is of **malicious intent** onto a computer. Such software comes in many forms, such as viruses, Trojan horses, spyware, and worms. **Malware**, short for malicious software, is any software used to disrupt computer operation, gather **sensitive information**, or gain access to private computer systems. Malware is defined by its malicious intent, acting against the requirements of the computer user, and does not include software that causes unintentional harm due to some deficiency. The term badware is sometimes used, and applied to both true (malicious) malware and unintentionally harmful software.

A botnet is a network of zombie computers that have been taken over by a robot or bot that performs **large-scale** malicious acts for the creator of the botnet. **Computer viruses** are programs that can replicate their structures or effects by infecting other files or structures on a computer. The common use of a virus is to **take over** a computer to steal data. **Computer worms** are programs that can replicate themselves throughout a computer network, performing malicious tasks throughout.

Ransomware is a type of malware which restricts access to the computer system that it infects, and demands a ransom paid to the creator(s) of the malware in order for the restriction to be removed.

Scareware is scam software of usually limited or no benefit, containing malicious payloads, that is sold to consumers via certain unethical marketing practices. The selling approach uses social engineering to cause shock, anxiety, or the perception of a threat, generally directed at an unsuspecting user.

Spyware refers to programs that **surreptitiously** monitor activity on a computer system and report that information to others without the user's consent. One particular kind of spyware is **key logging** malware. Keystroke logging, often referred to as keylogging or *keyboard capturing*, is the action of recording (logging) the keys struck on a keyboard.

A Trojan horse, commonly known as a Trojan, is a general term for malicious software that pretends to be harmless, so that a user will be convinced to download it onto the computer. **A denial-of-service attack** (DoS attack) or distributed denial-of-service attack (DDoS attack) is an attempt to make a computer resource unavailable to its intended users. Another way of understanding DoS is seeing it as attacks in cloud computing environment that are growing due to the essential characteristics of cloud computing.

Phishing is an attack which targets online users for extraction of their sensitive information such as username, password and credit card information. Phishing occurs when the attacker pretends to be a trustworthy entity, either via email or web page. Victims are directed to fake web pages, which are dressed to look legitimate, via spoof emails, instant messenger/social media or other avenues.

Application vulnerabilities

Applications used to access Internet resources may contain security vulnerabilities such as memory safety bugs or **flawed authentication checks**. The most severe of these bugs can give network attackers full control over the computer. Most security applications and suites are incapable of adequate defense against these kinds of attacks.

Security token. Some online sites offer customers the ability to use a six-digit code which randomly changes every 30–60 seconds on a security token. The keys on the security token have built in mathematical computations and manipulate numbers based on the current time built into the device. This means that every thirty seconds

there is only a certain **array of numbers** possible which would be correct to validate access to the online account. The website that the user is logging into would be made aware of that device's serial number and would know the computation and correct time built into the device to verify that the number given is indeed one of the handful of **six-digit numbers** that works in that given 30-60 second cycle. After 30–60 seconds the device will present a new random six-digit number which can **log into** the website. [3]

Task 3 Vocabulary

A. Find the keywords in the text that match the definitions below.

1. A scientific and practical field focused on protection, safety, and risk prevention on the Internet. 2. A method of protection that converts original text into a secret code that cannot be read without a key. This ensures that, in case of interception, the message remains protected. 3. A type of malicious act in which someone or something illegally penetrates a restricted and protected space. 4. An activity that is morally, socially, and legally condemnable, used by cybercriminals or hackers who employ deceptive content, distorted facts, and partial truths to mislead others. 5. A type of software designed to carry out harmful or malicious actions. 6. Personal data such as private messages, photos, and confidential notes. 7. To occupy and take full control of something (a computer or account). 8. An adverb that describes a manner of action performed in a way that is not visible to others. 9. A technical condition in which it is impossible to verify a user's real profile and identity due to system bugs or malicious interference. 10. To access your current profile or account, or to start up the computer system. 11. Massive and all-encompassing. 12. Vulnerable, unreliable, and not fully protected.

Task 4 Answer the questions

1. What is Internet security? How does your definition differ from the definition in the text.
2. Why Internet Security is so important today? What does the author of the text say about it?
3. Which digital security methods are mentioned in the text? Can you explain their principles?
4. How is malicious software defined in the text?
5. Which types of malicious software does the author analyze in the text? What do you know about other types of malware?
6. What is the main difference between computer viruses and computer worms? How do they replicate themselves?
7. What software do hackers use to extort money for access to a computer system?

8. What is a Trojan horse as a type of malware, and how does it work?
9. Why can DoS attacks and phishing be harmful to a computer system? What are the main principles of phishing?
10. What is the most significant threat associated with application vulnerabilities?
11. How can a security token be used to protect a computer system from being hacked?

Task 5 True or False

Read the statements below and indicate whether each one is true or false. If a statement is false, find the correct information in the text.

1. The Internet nowadays is reliably protected and safe for all users. You can rely on modern antivirus software without worrying about Cyber threats.
2. There is only one method of protection from Cyber threats: encryption. It is widely used as the most reliable way to protect your sensitive information.
3. Malware was created unintentionally without a clear purpose.
4. All types of malware target only user information. Passwords and private user data are in the focus of malware attacks.
5. Computer worms are programs that cannot replicate themselves on a computer network.
6. Computer viruses are programs that can replicate themselves and penetrate into the computer system.
7. Ransomware restores the user's access after they pay a certain amount of money.
8. You can quickly detect spyware because its activity is usually noticeable.
9. The Trojan horse pretends to be harmless. Therefore, a gullible user can download it.
10. The security token has a six-digit code that is easy to guess.

Task 6 Video Watching

A. *Find the video on YouTube: "5 Cyber Security Trends for 2022" // Tech Transformation.*

<https://m.youtube.com/watch?v=HokQO8BbtKs&pp=ygUfVG9wIDUgQ3liZXJzZWV1cm10eSB0cmVuZHMgMjAyMA%3D%3D>

Translate the keywords before watching the video.

To be off-the-charts, ransomware, increasing dramatically, prevalent, bad actors (in Cybersecurity), hitting its stride, to get into the act and force, security posture, fail to comply with, incurred, to mitigate, substantial laws, to take it on the chin, dwell time (in Cybersecurity), top-notch tools, quadruple ransom.

B. *Watch this video again and answer the questions:*

1. How does the presenter describe ransomware in this video? Why has ransomware become so prevalent?
2. What two factors does the expert mention in connection with ransomware attacks on small and medium-sized businesses?
3. What role do legal regulations and a strong security posture play in protecting consumer data? What could go wrong? How is consumer information protected in the USA?
4. What should you pay attention to when purchasing cyber insurance?
5. How is AI used as an advanced tool in cyber protection? What does the presenter say about its ambiguous use?
6. What are the two basic functions of ransomware?
7. What is a quadruple ransom attack? Whose personal data are at risk?

Use of English

Task 7 Verb Tenses

Use the words in brackets in the correct form.

1. Key-loggers 1 _____ (to be) in widespread use for a long time and may be delivered via malicious applications. My friend Jim, a student of Technology College, 2 _____ (to download) and 3 _____ (to set up) a new healthy eating application on his smartphone last month. Young people who want to keep fit usually use this app. Since he 4 _____ (to install) the app, Jim 5 _____ (to feel) much more confident and optimistic. He 6 _____ (to try) to avoid street food, and he 7 _____ (to achieve) results this month. The app 8 _____ (to design) a year ago by British medical volunteers to regulate cash payments for online food purchases. The volunteers 9 _____ (to equip) the app with both customizable manual settings and automated algorithms. A central server controls the application, which automatically sends useful tips and helpful instructions. No other app 10 _____ (to have)

such a positive impact on Jim's health since he 11 _____ (to participate) in a healthcare event during a two-week healthy eating festival last month.

2. The basic principle of the Healthy Eating App is to enter your data – such as weight, height, body type, eating habits, and taste preferences. The system then processes this information to create an individual plan. Last week, I 12 _____ (to try) to test this application. While entering my personal data, I 13 _____ (to remember) previous warnings about the Cyber intrusion. As a result, a keylogger 14 _____ (to record) my sensitive data, and I 15 _____ (to detect) the hacking attempt. Fortunately, my account 16 _____ (to block, automatically), and I received a message asking me to set a more secure password.

Task 8 Formal and Informal email

Read the instructions and think about what you know regarding writing formal and informal emails. What keywords, phrases, and expressions are typically used?

Email writing is an essential skill for a technical specialist. Often, you need to switch between formal and informal styles depending on the recipient, whether you are writing to business partners or close colleagues. You should follow basic guidelines regarding text structure, appropriate expressions, linking words, and etiquette.

A. Read the two emails and identify which one is written in a formal style and which in an informal style. Then, match the key expressions in italics (1–11) from Email 1 with their equivalents in Email 2. The equivalents in Email 2 are not marked, so you will need to identify them.

Email 1

Hi, Simon!

1) *I'm happy to get your invitation* to participate in the technical exhibition. 2) *You've chosen a great venue* – the Science Museum – and I'd love to show you the device I invented four years ago. This is a fantastic opportunity. 3) *I'd love to come to London* and meet your colleagues who'll be there. 4) *It would be amazing* if we could visit the Royal Opera House. 5) *I'm more into ballet than opera*, so I'm hoping to see *La Sylphide*. Tickets were sold out, but I managed to buy a few.

One of my uni friends lives in the suburbs, in a private house, 6) *so we can gather there after the exhibition*. I've invited Mr. Malcolm to join us. It's been years since we last saw him, and he's already agreed to come. 7) *Check* if we can buy his latest book at the publishing house, and 8) *I'll let you know* whether I can pick it up myself or arrange fast delivery. I'd really love to have

dinner at a vegetarian place in the city centre — just like we used to during our student days. 9) *Do you know if Aubergine Snacks Café is still open? And is James Pete still doing his Friday art performances? Can't wait to see university friends and our favourite professor.* 10) *Let me know how much we'll need to organise everything.*

11) *Can't wait to shake your hand and see Professor Malcolm again!*

All the best,

Emily

Email 2

Dear Simon,

I was delighted to receive your proposal to participate in the Wearable Gadgets Show. The choice of venue – the Science Museum – is especially fitting for presenting the device I have been developing over the last four years. I am pleased to accept your invitation and look forward to visiting London to see your colleagues who will also be attending the event. I would be most grateful if you could go with me to the Royal Opera House. My preference would be to attend the ballet *La Sylphide* rather than an opera performance.

My university friend lives in a private house in the suburbs, which provides an excellent opportunity to host a small gathering. I have already invited our former teacher, Mr Malcolm, and he has kindly agreed to join us. It has been far too long since our last meeting. If possible, could you inquire whether Professor Malcolm's latest book is available to purchase from the publisher? I will inform you whether I can collect it in person or arrange express delivery.

As for dining arrangements, my culinary preferences remain unchanged. I would be interested to know whether Aubergine Snacks Café is still open. I also recall the Friday art performances by James Pete, and I would be delighted to know whether he is still performing. I believe this occasion will be a wonderful opportunity to reconnect with our university friends and our teacher. Please inform me of any anticipated expenses related to the event.

I very much look forward to seeing both you and Professor Malcolm again.

Yours sincerely,

Emily

B. Categorize the key expressions in the first and second emails. Focus on how they can replace each other in emails:

1. *Active / Passive voice.* Which email has more active forms? Which one contains more passive constructions?
2. *Verbs, verbal constructions / Nouns, noun constructions.* Which type of email relies more on using verbs, and which relies more on using nouns that replace verbs?
3. *Linking words.* How are linking words used in formal and informal emails?
4. *Verbs and modals that are used without pronouns.* In which type of email is it appropriate to use a verb without a subject pronoun? In which type of email is it not appropriate? What effect does this have?
5. *Email structure.* Identify the paragraphs in the emails that correspond to the following parts: acknowledgment of the email, acceptance of the invitation, giving information and details, suggestions.

Task 9 Writing an email. Practice

A. Choose one topic from the list below and write an email in a formal or informal style.

1. Invitation to attend and participate in a high-tech conference.
2. Invitation to join a team of volunteers helping to teach children mathematics at summer camps in exotic countries.
3. You are offered the opportunity to take part in an intellectual quiz with a cash reward.

B. Ask your classmate to reply to your email using the same style.

Unit 4

Mobile Phone Technology

Task 1 Lead-in

Read and discuss the introductory statements. Do you agree or disagree with them? Add any relevant information you may have about the facts presented. Provide your comments on each statement.

1. The iPhone, originally conceived as a functional and reliable gadget, has become an integral part of everyday life. It is an extremely popular, technologically advanced, and fashionable device.
2. Mobile devices have completely changed the nature of social communication, making it highly dynamic. However, this change may also have certain negative consequences.
3. Apple devices offer a variety of features that help users perform tasks more securely and conveniently. One of the most essential elements is the Apple ecosystem, which allows seamless connectivity between devices.
4. The rapid growth of telecommunications and the widespread use of smartphones have created a new problem: chronic phone addiction and a growing alienation from the traditional way of life.
5. While modern gadgets play an important role in everyday life, many people around the world are reducing their online time and focusing on offline activities.

Task 2 Reading

Read the article and translate the keywords in bold.

10 years ago today, Apple and iPhone changed our world

Taken from: applebase.net

Ten years ago today Apple **shipped** a wide-screen iPod with touch controls, a revolutionary mobile phone, and **a breakthrough internet device**. But it wasn't three products. It was one product. And we got it, Steve. We got iPhone. On June 28, 2007, Apple shipped the original iPhone. People had been waiting outside for days in lineups that ran for blocks. Anticipation was **off the charts**. Competitors were nervously **dismissing** it as an **over-reaching** and over-priced. Media was calling it the Jesus Phone.

Steve Jobs had put sneaker to stage only six months earlier to introduce it. The most incredible keynote presentations of his life—a life filled with incredible **keynote presentations**—and in the history of consumer electronics, he'd taken a moment before he started **to assemble the team** and tell them to remember the moment: The moment before iPhone. Because, in the next moment, everything would change. During the keynote Jobs said it was rare enough for a company to revolutionize even one product category. Apple had already revolutionized two: Computers with the Mac and personal music players with the iPod. With the iPhone they'd be going for three.

He set up and knocked down the physical keyboard and the stylus, features that dominated the BlackBerry, Motorola, and Palm smartphones of the day. Then Jobs introduced the multitouch interface that let the iPhone smoothly **pinch-to-zoom**, the physics-based interactivity that included **inertial scrolling** and **rubber banding**, and **the multitasking** that let him move **seamlessly** from music to call to web to email and back. They were technologies that would one day become **commonplace** across the industry but back then looked like science-fiction.

Technology alone wasn't enough

More importantly, iPhone also included several sensors **to enhance the experience**, like an **accelerometer** that could automatically **rotate** the screen to match device orientation, **a proximity sensor** that could automatically turn off the screen when close to the face, and **an ambient light sensor** that could automatically adjust brightness. And it could also be charged — and critically, **synced to** iTunes — by the same 30-pin Dock connector as Apple's already exceedingly popular iPod. ...The

original iPhone...couldn't work on two of the U.S.' big four **carriers**, Verizon and Sprint. Not that it mattered; the original iPhone was exclusive to AT&T.

It also lacked GPS, or support for faster 3G UTMS/HSPA data speeds. In addition to no hardware keyboard or stylus, the iPhone also didn't have a removable, **user-replaceable** battery or SD card support. None of that pleased existing power users of the time. Nor did the absence of **an exposed file system**, copy and paste or any form of advanced text editing, and, critically to many, support for third party apps. Likewise, since the iPhone had a real web browser instead of a WAP browser, which was required to display carrier-based multimedia messages, the original iPhone didn't support MMS either.

All of this was **wrapped in** bead-blasted aluminum with a black plastic band around the back to allow for **RF transparency**. The software team, **under the auspices of** Scott Forstall, was still racing as well. Greg Christie, Bas Ording, Mike Matas and others had been working on the human interface and interactivity for a long time already, but **things were still being tweaked**. Split screen for email, for example, got pulled after Jobs felt it was too crowded on the small screen. [4]

Task 3 Vocabulary

A. Find the keywords in the text that match the definitions below.

1. An innovative gadget that launches a new era in technology.
2. An adverb that describes an action done without sudden or rapid movements.
3. An unusually intense emotional reaction to something exceptional, beyond any measurable scale.
4. Synchronized.
5. To ignore technical advantages or minimize the value of a gadget.
6. A common and widespread thing.
7. A mobile operator in the USA.
8. To make minor improvements.
9. Estimated higher than the actual value.

B. Find the technical terms and expressions in italics in the text that match the definitions below.

1. A feature that enables users to scroll through content on a mobile device screen.
2. The ability to perform multiple tasks simultaneously on a device.
3. A function that allows users to zoom the image using finger gestures.
4. A sensor that automatically rotates the screen based on the device's position.
5. A sensor that turns off the screen when the device is held close to the face during

a call. 6. A sensor that adjusts the screen brightness based on surrounding light conditions. 7. A type of phone battery that can be removed and replaced by the user. 8. A characteristic of a material that allows radio waves to pass through it.

Task 4 Answer the questions

1. Why was the original iPhone considered a breakthrough, revolutionary device? How many gadgets could it replace?
2. What was the public reaction? What did people do on the day Apple released the first iPhone?
3. The competitors were happy, weren't they? Did they truly appreciate the iPhone's potential? What did the media call the iPhone?
4. What exactly did Steve Jobs say at the beginning of the presentation? What did he mean?
5. How many obsolete phone components did Steve Jobs remove and replace with modern ones on the iPhone?
6. What digital navigation mechanisms from the original iPhone do we still use today?
7. To what extent did digital sensors enhance the functionality of the original iPhone? How many were integrated, and what types were they?
8. What material was the original iPhone made of? Is it still considered a defining feature of the iPhone design today?
9. How many US carriers could support the original iPhone?

Task 5 True or False

Read the statements below and say whether each one is true. If a statement is false, find the correct information in the text above.

1. The release of the original iPhone sparked a significant public backlash, with a wide range of reactions covered in the media.
2. Apple unveiled the original iPhone in 2006. Steve Jobs introduced it six months before its official release.
3. An early model of the iPhone had five sensors: an accelerometer, a front facing camera sensor, a proximity sensor, an ambient light sensor, and a fingerprint sensor.
4. All mobile operators in the USA agreed to work with the iPhone
5. One of the main drawbacks of the original iPhone was the non-removable battery.
6. The original iPhone supported Multimedia Messaging Service (MMS).

7. The first iPhone had an aluminum case with a gray plastic band to allow radio signals and waves to pass through.
8. In 2007, the original iPhone continued to evolve significantly in the following years.

Task 6 Video Watching

A. Find the video on YouTube “Apple’s iPhone: the 15 Year History Explained” // CNET.

https://m.youtube.com/watch?v=Qz3PHyM_0P0&pp=ygUiQXBwbGUncyBpUGhvbmUgdGhlIDE1IHllYXIgaGlzdG9yeQ%3D%3D

B. Translate the keywords before watching the video.

The main/true appeal, an array of colors and sizes, shifted away, slim and metal design chassis, to showcase, lineup, high refresh rate display, ultra wideband chip, extra perks, antitrust concerns, meteoric success, ubiquitous.

C. Watch this video and answer the questions:

1. When did the first iPhone go on sale? How did Steve Jobs present his revolutionary invention?
2. How powerful and functional was the first iPhone? What aspect of it seemed futuristic? What is the true appeal of the iPhone today?
3. How has the iPhone evolved over the past two decades, moving away from its original design and hardware? What role have apps played in its ongoing development?
4. What has remained unchanged and looks like a brand element of the iPhone?
5. What are the main advantages of the latest iPhone models, such as the iPhone 13 Pro (design, display, camera sensors, and other features)?
6. What additional features can an iPhone offer for car owners?
7. What negative aspects does the presenter mention in relation to screen time, the Apple ecosystem and AirTags?
8. How does the presenter describe the success of the iPhone?

Use of English

Task 7 Articles

Read the text and fill in the gaps with the correct article. Then answer the questions provided below.

The iPhone: an ultra-functional but still vulnerable device

Part 1

Modern multifunctional phones have become 1 ___ essential part of daily life. People in many countries around the world can hardly imagine their everyday routines without 2 ___ powerful and convenient mobile device. Today, even 3 ___ budget smartphone may feature up to 512 GB of storage, a quad-core processor, and 1 GB of RAM. 4 ___ information you need – for work or planning a holiday – is now easily accessible through your iPhone or smartphone. Take it out of your pocket and tap the screen. 5 ___ search engine, integrated with the internet browser, is available on your phone, making it easy for every user to find what they need. Business professionals, scientists, and young people appreciate this convenience as one of 6 ___ most effective technological solutions of our time. Today, mobile phone displays offer 7 ___ dynamic array of applications — from email inboxes and web browsers to shopping apps, weather trackers, and healthy eating guides. Apple’s proprietary iOS has made 8 ___ iPhone a trusted, efficient, and user-friendly tool for 9 ___ millions. Additionally, 10 ___ built-in features for cyber threat detection, cybersecurity, and system maintenance have made mobile security more manageable and effective on Apple devices.

Part 2

1 ___ iPhone, as well as any other complex device, remains vulnerable. It is 2 ___ problem for advanced and functional technical gadgets. While old-fashioned push-button cell phones are still in use mainly among older people, these devices are more reliable and invulnerable. 3 ___ Simplicity is the ground of reliability. Kicks, scratches, shakes, and other external influences have no effect on the operation and safety of 4 ___ simple push-button telephone. 5 ___ modern smartphone will go off if we slightly damage it. 6 ___ drop of water can be dangerous for 7 ___ smartphone in your hands, but not for 8 ___ push-button phone. It is simple and better protected. 9 ___ regular push-button telephone came out on top among people over 60, which was not 10 ___ unexpected result. 11 ___ usability of cell phones comes first in 12 ___ street survey. Simplicity, as the basis for accessibility for all, comes second. Despite 13 ___ lack of internet connection, 14 ___ push-button phone has a useful energy-saving flashlight that is very helpful in dark spaces. Older people use button phones for their advantages: simplicity, functionality, and reliability. This device remains 15 ___ effective means of communication.

Task 8

Read the text and express your general opinion. Then answer the questions.

During the street survey, people also shared their ideas about life principles, habits, and ways they use gadgets. One man offered an interesting explanation. According to him, simple things seem the most reliable. They carry something axiomatic and powerful. Simplicity forms the foundation of complexity in life, which is why it appears more reliable. Even in our personal lives and careers, it is easier to achieve happiness and success when we focus on simple, fundamental goals. A warm, cozy home, a loving wife cooking in the kitchen, and children playing by the fireplace – these are the most cherished visions of happiness for an ordinary man, who works as a tax inspector, a bank accountant, or a teacher.

Challenging goals and lifelong ambitions often lead to dismal failure, while simple goals offer a more reliable path to success. We know the famous words: “...but money can’t buy me love.” Neither wealth nor high social status can guarantee true happiness. Even education and prestigious scientific careers may seem insignificant when compared to the timeless values, quiet joy. When we chase our ambitions and aim to climb higher on the career ladder, we risk losing everything – our vitality and our precious time. As a result, we may face disillusionment and become disappointed with dreams and desires that never come true. This is the essence of simplicity as the most reliable path to happiness and success. Listen to your heart and choose the shortest, most honest way to achieve your goal – and you will succeed.

Answer the questions:

1. Do you agree with the main idea of the text – that simplicity is the most reliable path to happiness and success?
2. Can you think of any movie or literary characters who failed dramatically by pursuing sophisticated goals in business, science, or life?
3. What are your preferences when choosing a piece of technology, gadget, or device: simple and reliable, or highly functional but less durable?
4. Can you describe some simple and reliable things – such as manual devices, vehicles, inventions, methods, or technology?
5. What correlation do you see between simplicity and reliability in the future? Are there any Internet trends that follow these principles?
6. Can you recall a time in your life when an ultra-functional gadget started acting up or broke down, but a simple device came to the rescue?
7. What simple devices are still in trend today?

Task 9

Read the text and fill in the gaps with the words given below. Then answer the questions.

A distress signal, indispensable, name, a thing, deciphered, transmitted, demand, technology

Morse Code is Still With Us

Morse Code Telegraphy appeared in 1835 as an innovative and breakthrough 1 _____ of its time. As a system of signals, fast and reliable, Morse code quickly became a household 2 _____. It uses a combination of short and long tones to form a code that can be easily 3 _____. In an emergency, it was an 4 _____ device on the ship. Therefore, every vessel had it on board. SOS is the most important message that can be 5 _____ by Morse code in a dangerous situation asking for help. This technology became a ray of hope for a sinking ship. Thanks to the skill of Morse operators, many passengers on sinking vessels survived in the 20th century. Rescue teams also used Morse code in their work.

The Morse telegraph works without electricity, so during blackouts, any person who can operate Morse code will transmit 6 _____.

For nearly two centuries, Morse code has been used across various fields – from ships and trains to military communication. In particular, railroad Morse operators could broadcast navigation messages throughout the railway network. Morse code broadcasters were in high 7 _____ due to the widespread use of Morse code in military affairs, rescue missions, railway systems, and everyday life.

The Morse code railway telegraph was officially discontinued in 1985, but retired operators continued to use it locally, exchanging private messages with their colleagues. Eventually, the Morse telegraph remained popular among radio amateurs.

Today, one of the most common uses of Morse code is in education and language learning. Studying this sophisticated system of signals can enhance memory and cognitive functions. Students who learn Morse code improve their multitasking abilities and strengthen their language skills. Moreover, learning Morse code as a form of language helps them understand the principles of communication and broadcasting. So now is not the time to say that Samuel Morse's invention is 8 _____ of the past. It is simple but reliable.

1. Was the Morse telegraph a groundbreaking broadcast technology in the 19th century? What do you know about the technical devices of that time?
2. What are the basic principles of the signal combinations used in Morse code?
3. Do you see any similarities between Morse code and programming languages?
4. Who used Morse code in the 19th and 20th centuries, and how was it used? Can you give some examples?
5. When was Railway Morse code officially discontinued and what happened after that?
6. Is Morse code a completely obsolete technology today, or is it still in use? What benefits can Morse code offer to an amateur?
7. What do you know about new forms of Morse code and its modern digital adaptations: Morse code as visual signals, as a system of sounds and beeps, Morse code in emails and text messages?

Task 10 Writing an opinion essay

Write a short essay of 10 – 20 sentences, using the essay writing tips provided below.

1. Choose the topic of the essay. You can choose: “*iPhone vs. Morse code: sending message across the centuries*”; “*Simplicity and Reliability of Devices, Approaches, and Techniques*”; “*How Simple Devices Can Help in an Emergency*”.
2. The essay structure consists of an introductory paragraph, the main body paragraphs, and a conclusion.
3. In the introductory paragraph, present the main topic and your point of view. You may use a concession clause to highlight the problem by showing contrast.
4. The main body must include two paragraphs presenting opposing opinions. You may analyze the issue from different perspectives and provide convincing arguments for each.
5. The concluding paragraph should summarize the main points and clearly restate your final opinion.
6. It is important to use linking words or phrases such as: firstly, in addition to this, moreover, at the same time, in conclusion, etc.

Unit 5

Drone Technology: Exploring Flight Mechanics

Task 1 Lead-in

Read and discuss the introductory statements. Do you agree or disagree with them? Add any relevant information you may have about the facts presented. Provide your comments on each statement.

1. Today, drones are widely used in everyday life as convenient gadgets. We can see them everywhere – from urban inspections to delivery services.
2. Using drones in public places can sometimes be problematic due to the noise they generate and the risk of accidents. Drones may cause harm to people or damage property.
3. Drones also serve useful functions in social services, such as cargo transportation and aerial videography. They allow users to capture exciting videos from above.
4. Drones can be used in the film industry, providing excellent opportunities for filming scenes from high altitudes in areas that are difficult to access. They can replace traditional video equipment, enhancing the overall efficiency of film production.
5. Operating drones is a responsible activity; many owners are therefore required to obtain a license to ensure safe and professional use.
6. It is necessary to establish clear standards for civilian drone use, and any illegal activity involving drones should be penalized.

Read the article and translate the keywords in bold.

Flying quadricopter drone controlled by an iPhone

By Robert S. Anthony Taken from: www.macworld.com

Buzzing above the heads of **marveled**, **camera-snapping** media representatives at CES Tuesday was a weird looking, smooth-flying toy helicopter from Parrot that can be controlled with nothing more than an iPhone or iPod touch and appropriate software.

The AR.Drone, a four-rotor “quadricopter” which is controlled by Wi-Fi signals, includes wireless cameras that can stream video to an iPhone or iPod Touch, thus allowing you to use your actual surroundings as “targets” in an “**augmented reality**” (that’s what the AR stands for) video game. Want to take out those mean goldfish? You can **hover** the copter nearby, focus on them with the wireless cameras, target the dangerous beasts and “fire” away. The copter, made of **carbon fiber** and PA66 plastic, can be used outdoors with **the rotors** unprotected or indoors with **a shield** which protects and allows the copter to bump gently against obstacles—like **unwary people**—without damaging the rotors.

The quadricopter is controlled by accelerometers and an embedded Linux platform originally designed for mobile phones, according to Parrot. The open-source platform is being made available to software developers at CES, the company said. **In unveiling** the AR.Drone, Parrot said that software for controlling the copter would be available on a number of platforms, not just the iPhone and iPod Touch.

At CES Unveiled, **a press-only event**, the purple and black AR.Drone buzzed around near the main entrance, drawing a steady stream of wide-mouthed still and video photographers. People were able to walk fairly close to **the unit**, which was able to **hover solidly in a single position** and then **fly off smoothly**. The AR.Drone has a top speed rating of about 11 mph and weighs 12.7 ounces without **the protective hull** and 14.1 ounces with it.

The unit runs on a necessarily lightweight, three-cell, 1,000 mAh lithium polymer battery. It has a 15-frame-per-second (fps) front camera as well as a high-speed (60fps) vertical camera that looks straight down. The four 15-watt rotors spin as fast as 1,500rpm. Parrot is better known for its Bluetooth devices such as wireless stereo speakers and handsfree automotive gadgets. It bills the AR.Drone as the “first

helicopter with automatic flight stabilization.” The **unit** will be available later this year, the company said. Pricing has not been set. [5]

Task 3 Vocabulary

Find the keywords in the text that match the definitions below.

1. A reality created by modern technologies and devices as an alternative to physical reality, often used in video games, computer simulations, etc.
2. The ability of a drone to remain motionless in the air without visible movement.
3. The ability of a drone to leave a fixed position in the air without sudden or rapid movement.
4. A typical sound emitted by a drone that can be annoying to those nearby, often perceived as flight noise.
5. The moving parts of a drone, the components that make it fly.
6. The material used in the drone's construction.
7. A drone component that protects the rotors when flying indoors.
8. A drone component that protects the body and affects the overall weight.
9. An official event held to demonstrate, introduce, or advertise a new technology, device, or achievement.
10. A person who is unaware of their surroundings, potentially leading to awkward or even dangerous situations.
11. A general term used to describe a device that is unknown to everyone nearby.

Task 4 True or False

Read the statements below and indicate whether they are true or false. If the statement is false, find the correct information in the text.

1. The flying device was appreciated by everyone at the presentation from the beginning.
2. The author of the article portrays the presentation attendees as serious, gloomy, and indifferent individuals who showed little interest in testing the drone.
3. The experts who tested the AR Drone used a pendant control specifically designed for this purpose.
4. The drone has protective components for both the rotors and the body.
5. The drone can hover steadily in the air and fly off smoothly.
6. The protective equipment has minimal impact on the drone's overall weight.
7. The drone is equipped with four video recorders, allowing you to shoot video from different angles.

8. We can control the drone in a Wi-Fi zone using a mobile phone or an iPod Touch.

Task 5 Answer the questions

1. Were the audience and media representatives impressed by the flying drone buzzing above them during the presentation?
2. How can a drone quadcopter be controlled? What software, devices, and platforms provide proper navigation for drones?
3. What are the physical characteristics of the drone (structural parts and components, material, and weight)?
4. What are the technical capabilities of the drone (rotor and battery power, functionality of the video equipment)?
5. What are the flight characteristics of the drone (flight trajectory and aerial maneuvers)?
6. How is augmented reality integrated into drone operations, and what is its primary role?
7. What types of acoustic sounds are typically associated with a drone flying overhead or approaching from a distance?
8. Do protective components increase the drone's weight, and what is the role of shields and the protective hull?

Task 6 Video Watching

A. Find the video on YouTube: "Drones. The complete Flight Dynamics"// Sabin Civil Engineering. Before watching, answer the questions.

<https://m.youtube.com/watch?v=C0KBu2ihps&pp=ygUjZlJvbmVzIHRoZSBjb21wbGV0ZSBmbGlnaHQgZHluYW1pY3PSBwkJ3gkByohjO8%3D>

1. What do you know about a drone's ability to fly in different directions?
2. What interesting maneuvers can drone perform in the air?
3. How are the drone's components designed for flight, including the rotors, rotor blades, and body?

B. Translate the keywords and watch the video.

Take off, to do take off, axis, to hover, levitation, clockwise, counter clockwise, spin, pitch motion, roll motion, yaw motion, complex maneuvers, lift force, drag force, increase the rotor speed, torque, airfoil, laid speed, forward, sideward, angle, angular motion, velocity.

C. Answer the questions according to the video.

1. Why does the presenter say that flying a drone is fun? Can a drone rotate around its axis?
2. How are the motor and propeller systems configured? How are propeller blades designed to generate maximum lift force?
3. What is the controller's role in takeoff, levitation, and hovering, and how does it contribute to lift?
4. What unique phenomenon can occur when the propellers rotate? Have you ever observed this effect?
5. How is Newton's Third Law applied in the design of the motor and rotor systems, and how do the motor body, stator, and rotor produce counterforce?
6. How does the rotation direction of the rotors influence the drone's movement? What happens if all four rotors spin in a clockwise/counter clockwise?
7. What happens when the net reaction torque equals zero? What is yaw motion? What happens to the reaction torque?
8. What physical laws govern pitch and roll motion? How can you make a drone fly sideways or forward?
9. What is the principle of circular motion, and how can you maneuver a drone to fly in a perfect circle?

Use of English

Task 7 Relative Clauses

A. Fill in the gaps in the sentences 1 – 8 with the clauses a – h.

a) which is the latest and most advanced version released by Parrot; b) who marveled like children; c) which are currently the most reliable means of safety for drones; d) whose capacity is 1,000 mAh; e) which includes both a front and a vertical camera; f) the richest technology entrepreneur in our town; g) the 21-year-old AR drone designer; h) who is the head of our tech department

1. The AR Drone, _____, has come to the fore this year in the quadcopter market.
2. Shields and protective hulls, _____, are designed to prevent damage when a gadget is used indoors.
3. Mass media representatives, _____, kept the toy quadcopter in the focus of their cameras during the presentation.

4. Video equipment, _____, can be used with a quadcopter drone to create augmented reality.
5. A lightweight three-cell lithium polymer battery, _____, can operate in power-saving mode.
6. Jim Wilkinson, _____, is the youngest tech professional in our company.
7. Antonio Morris, _____, has been interviewed by BBC journalists.
8. My uncle, Alan Boles, _____, invited me to apply for a junior assistant position in the software testing lab.

Task 8 Relative pronouns

A. Read the text and fill in the gaps with the appropriate relative pronouns from the list below. In some cases, you may need to use a preposition with the relative pronoun.

Safety Rules for Using Drones

many of whom, who, whose, which, where

This story happened many years ago in one of the southern towns. Two neighbors, 1___ lived as close friends, suddenly became enemies. The case was controversial and attracted the attention of the local press. Journalists, 2___ job is to get to the truth, also could not reach a consensus.

Like most residents of their small town, 3___ were around 60 years old, the two friends had retired and lived a quiet life, showing little interest in modern technology. However, one of them visited his grandson and watched an AR Drone demonstration, 4___ inspired him to purchase a cutting-edge device he had never seen before. The drone, designed for professional photo and video capture, featured a high definition camera. Eventually, he purchased the gadget and came back home.

Early in the morning, a strange noise broke out above the hill 5___ the houses stood. The drone owner was testing his new device. His neighbor, 6___ lifestyle included peaceful mornings, was suddenly woken up. He saw the device hovering in front of his windows. Not knowing what to do, he – as the local newspapers wrote – “took the gun and killed the UFO.”

The neighbor, 7___ did not expect such an outcome, was frightened and cried. From that moment on, everything changed dramatically, and the owner of the downed drone filed a lawsuit demanding monetary compensation. The gadget was quite expensive, 8___ greatly surprised his neighbor. He still could not fully comprehend what had happened.

In court, the lawyers argued fiercely with one another, supporting the drone owner and the man who shot it down. Meanwhile, residents were unable to reach a unanimous conclusion. The story quickly attracted media attention, spreading far beyond the small town. It sparked a debate over who was right.

Supporters of the drone hunter, 9___ valued private space and property rights, promoted the idea of defending homes from aerial intrusions. Opponents, 10___ faced criticism, argued that the drone hunter should pay compensation. As a result, the debate remained unresolved, with no clear consensus on who was right.

Some people proposed an alternative solution: the drone hunter would only have to pay half the price. However, no one knows whether this solution was ever accepted.

B. Answer the question according to the text.

1. Who do you think is right – the drone owner or the drone hunter – and why?
2. What do you think about the idea of paying half the price? Can you suggest a different solution? Is there a more creative or alternative way to resolve the situation?
3. How can technology issues create conflicts between different groups of people – such as geeks and poets, technicians and artists, or residents of big cities and people from remote rural areas?
4. Can you think of other situations where modern technology has created a barrier to mutual understanding between generations – for example, between grandparents and grandchildren?

Task 9 Adjectives in formal English

Read the grammar rules and fill in the gaps in each block using the words in brackets.

A. Adjectives can be formed by adding suffixes such as -ory, -ial, -able, -ative, -ent, -less, -ous, and -y. In formal English, adjectives can be used to define quality. For

example: *introductory offer, contradictory statement. applicable _____, approachable _____, preparatory _____, managerial _____, provocative _____ (person, question, work, position, standards).*

B. Adjectives emphasize certain qualities of things, which can be either positive or negative. For example: *unanimous decision, categorical refusal, undeniable fact, irrefutable evidence, formidable _____, dismal _____, unrivaled _____, incomparable _____, incomparable _____, futile _____, indisputable _____ (champion, challenge, failure, effort, result, skill, things).*

C. There is a large category of negative adjectives that allow us to describe the opposite qualities or features. These adjectives often use prefixes such as un-, in-, il-, im-, ir-, or de-. For example: *deficient knowledge, incompetent person, unfinished project, unsuccessful attempt, unproductive _____, ineffective _____, unacceptable _____, unpredictable _____, inappropriate _____, incompatible _____ (solution, result, material, response, colors, method).*

D. Adjectives with a chronological meaning (related to time or period) can be formed using prefixes such as pre- and post-. For example: *pre-release version, post-experimental procedures.* Additionally, prefixes like over- and under- can be used to form adjectives that describe intensity or degree — *for example: overqualified specialist, underqualified employee.* For example: *post-work _____, underrated _____, overvalued _____, prehistoric _____ (talent, ages, resource, inspection).*

E. We can also use adjectives to express or emphasize an opinion. For example: *The decision to cut the company's budget was unwise, which led us to seek a partnership with a new sponsor. The quality of the software is considered unsatisfactory; therefore, we need to buy software from another vendor.*

Task 10

Fill in the gaps using the words listed below to create adjectives.

Approach, to consist, to harm, knowledge, memory, to qualify, provocation.

1. The technical guide at the exhibition was _____ about wearable gadgets that have become popular this year. 2. The drone's operating instructions include colorful illustrations that make the basic guidelines more _____. 3. Medical workers create social and health apps to avoid everything that could be _____ to human

physical and mental health. 4. After four months, our new trainee demonstrated a phenomenal ability to resolve complex issues, and as a result, we considered him _____ for the position. 5. Jim Clark, the head of the company, is a strict person but quite _____. 6. We did not take seriously the stream of _____ comments from our opponents, nor their _____ actions.

Unit 6

Cyberspace

Task 1 Lead-in

Read and discuss the introductory statements. Do you agree or disagree with them? Add any relevant information you may have about the facts presented. Provide your comments on each statement.

1. Over the past decades, cyberspace has become a vital social, educational, and political environment. Its gradual development affects all spheres of human life: from critical infrastructure to personal accounts on social networks.
2. Today, cyberspace embodies the key principles of an alternative reality in which the social component plays the central role.
3. Many people live in both real space and cyberspace, but sometimes they prefer virtual reality. This trend is a growing concern today.
4. Video game designers are interested in developing virtual reality. Moreover, they create applications for professionals in various fields, including psychology, medicine, education, and science.
5. Language is an essential tool in cyberspace because we must respond to what we read or watch. Our reactions generate numerous comments and video messages. Therefore, grammar skills and language proficiency help us communicate effectively with people around the world on the Internet.

Task 2 Reading

A. Before reading the text, write your own definition of cyberspace. How would you describe its qualities, volume, and capacity? Explain the difference between real space and cyberspace.

B. Read the text and fill in the gaps using the words from the list below. Then, focus on the definition, etymology, structure, and key ideas of alternative reality.

Cyberspace and alternative reality are not brand-new ideas...

Conventional, encryption, environment, influential, insatiable, interconnected, meet, poses, well.

In most cases, scientists define cyberspace as a technical 1 _____ in which social communication occurs through the interaction of computers, phones, and other 2 _____ devices. “Cyber” and “cybernetics” are not brand-new terms; their etymology is related to the ancient Greek word *kubernetes*, which refers to a person who knows how to direct, control, or generally operate a vehicle. Today, the Internet represents the main aspect of cyberspace, essential for modern politics, social interaction, and industry.

Cyberspace differs from physical space by offering greater functional freedom and anonymity. It doesn't have fixed boundaries and 3 _____ established rules or norms of behavior. As a result, users must rely on cyber ethics. As the Internet has developed and cyberspace has evolved, a set of 4 _____ rules has emerged to regulate user interactions within this environment. This phenomenon, known as cyber ethics, continues to evolve today.

A key question arises in the context of cyberspace: what is more essential – the technical infrastructure or its dynamic social development? On the one hand, cyberspace is impossible without devices and technologies. On the other hand, it serves as a vast channel for social communication. New projects and technologies introduce fresh possibilities for interaction, but hardware and software must also 5 _____ social expectations. Technical development often reflects current social issues. For example, the invention of email was inspired by the lack of fast and secure service for communication. Similarly, cyber threats and risks have driven programmers to develop 6 _____ and secure coding practices.

The idea of an alternative reality is not new; it has existed since ancient times. Various interpretations of alternative reality appeared in philosophy, literature, art, and social studies. Some of the most 7 _____ conceptions come from René

Descartes and Plato. Descartes' *brain in a vat* hypothesis suggests that we cannot fully perceive objective reality because the human mind is limited in its ability to grasp the true nature of the world. Plato's idealism provides a fundamental view of alternative reality. His Theory of Forms and the Allegory of the Cave propose that humans can perceive only projections of true forms. In the allegory, Plato describes people confined in a cave, watching shadows on a wall cast by objects behind them. These distorted shadows, produced by invisible puppeteers, are the only things the prisoners can perceive. According to Plato, human perception is limited to these projections, while the true reality, the world of ideal forms, remains outside of full perception. Modern interpretations of alternative reality are used in many Hollywood films, which often explore themes of illusion, perception, and the boundaries of reality.

Augmented reality is used in video games. The core principle of video game design is the creation of immersive worlds that fully engage players. Meticulously crafted to spark 8 _____ curiosity, modern video games offer users a hyperrealistic alternative reality. As a result, game addiction has emerged as one of the most common psychological issues of our time. In search of a better experience, many people increasingly turn to the virtual worlds of alternate reality, which have become deeply pervasive. This growing reliance on virtual environments 9 _____ real threats and complex challenges.

C. *Answer the questions.*

1. What does the author mention about the etymology of the term "cyberspace"?
2. What are the two main aspects of cyberspace discussed in the article, and what is the relationship between them?
3. What concepts of alternative reality does the author explore in the text? What do you know about Plato's Allegory of the Cave?
4. What is the practical role of augmented reality, and what advantages and disadvantages does the author highlight?
5. How might you predict the future development of cyberspace and augmented reality?
6. Who can make virtual reality safer and more comfortable environment for users?
7. What are advantages and disadvantages of video games? How might users be impacted by the simulated reality in video games?
8. How would you contribute to the development of virtual reality in your professional field (cybersecurity, VR hardware, Web design, programming, or social projects)?

D. Read the text and translate the keywords in bold.

Certain About Uncertainty: The Dangers of Virtual Reality

By Jeffrey Jose April 01, 2024
River Campus Libraries // rochester.edu

The world around us is **constantly evolving**. In the past, people hypothesized that we'd have flying cars, **hoverboards**, and interplanetary travel. Although some hypotheses about the world of the future ended up being fulfilled, not many could have ever predicted that humanity would expand into the virtual world. As more and more companies invest in the new technology, virtual reality is becoming increasingly **commonplace** in people's lives and more advanced. Virtual reality offers an escape from our chaotic, **ever-changing** world. It makes sense that the technology **has taken off** so much recently, especially after the COVID-19 pandemic when people couldn't even access the real world normally. On the surface level, virtual reality seems like a real **game changer**, however, this escape may not be as sweet as it seems. **Immersive extended reality experiences** create new kinds of uncertainty that are problematic. The uncertainty created by virtual reality is harmful for our emotional and physical health.

Virtual reality may seem like a new technology, but it has been around for quite some time. Virtual reality is continuing to become **a household name** around the world, mostly in the field of entertainment. However, companies like Meta and Microsoft intend to bring their virtual reality platforms into the commercial and military worlds. Apple has just released the Apple Vision Pro which is a high end virtual and extended reality headset with **immense** computing power. With these new advancements, it is likely that virtual reality will start to become more common in the workplace due to the benefits it can have for fields like medicine and healthcare. Although, virtual reality brings a lot to the table, such as the opportunity to perform practice surgeries without human or animal cadavers, the harms may **outweigh** the benefits.

Although it has many positives, the dangers of virtual reality are very real. Virtual reality creates uncertainty as it allows users to temporarily dissociate from the physical world around them. This creates *the uncertainty of not knowing which world is real or a simulation*. Anyone who has experienced virtual reality before understands how **captivating** and **immersive** it is. While locked in to a virtual world, it is likely that people can become hyper fixated on the virtual world and forget about the real world they live in. This also creates a problematic experience when **adjusting back** to the real world. The first time I used virtual reality, about 4 years ago, the technology was pretty good, but definitely far from perfect. I used the Google Cardboard, which at the time felt like the biggest new advancement in technology. Compared to the new Meta Quest 3, the Google Cardboard just looks like what it is, a

cardboard box. This comparison really shows how much virtual reality technology has changed in such a small amount of time.

I truly felt the advancement of this new technology when I used it. During my experience with the new Meta Quest 3, I was **fully mesmerized** by the new world I was within. I thought I would be able to easily distinguish between the real and virtual world, but as soon as I put on the headset, I became **fully immersed**. Sensory information from reality seemed to disappear into the background and the bombardment of virtual information just **took over**. The line between reality and virtual reality completely **faded** and I became **hyper fixated on** fully experiencing the new world I had been transported into.

How could a virtual experience have such real physical effects? That was just my first time playing a virtual reality game. I'm sure other virtual reality experiences could have much worse consequences. Later in my experience using virtual reality, *I completely lost track of time*. Although the home screen showed a digital clock on the virtual dock that would follow my head around every time I turned, once I was in the virtual world it was like time no longer existed. I was not prepared for the **side effects** of this. Immediately after **removing** the headset, I experienced **eye strain** and had a headache that lasted the entire day.

Now imagine if virtual reality became part of everyone's day-to-day life. If people are forced to use virtual reality for work, it can lead to new levels of overworking and stress. Tristan Bove writes, "Employees' anxiety over their job also increased by 19% when working in the metaverse, while their perception of their workload grew by 35% relative to the week spent in a physical office". Clearly the side effects of virtual reality become even worse when not in an entertainment setting.

...If you are doing virtual work, where is the accomplishment of getting that work done? When you do work, an important part of the process is feeling the dopamine hit of completing the work. When the stack of papers you're reading isn't even really there, this dopamine hit is nonexistent. There's no physical feedback of you putting the pen down after a hard day of work. In a virtual workspace, it may feel like the work you are doing is pointless and this could lead to feeling unsatisfied with your job. If virtual reality just creates a false sense of productivity **bundled with** several health issues, without enhancing the quality or quantity of one's work, what is the point? It is only **detrimental** to our work, but more importantly our health. In a world where toxic work culture and mental health problems because of it are **on a rise**, introducing virtual reality technology into our lives could only **exacerbate** these issues.

Although for now, it seems like virtual reality is a fun and exciting new technology that can improve our entertainment, people must remember the harmful side effects of this new technology. Tools can be powerful if used in the correct way, but they can also be just as deadly. We have to make sure we don't **fall off the plank** when it comes to virtual reality. [6]

Task 3 Vocabulary

Find the keywords in the text that match the definitions below.

1. A phenomenon that has become common, routine, or banal.
2. Developing gradually and continuously over time.
3. Something that doesn't have a solid or permanent foundation (compound adjective).
4. A key factor that completely changes the situation.
5. To become successful.
6. Attractive.
7. The quality that captures your attention and sparks your interest.
8. To return to a previous environment, requiring re-adaptation.
9. To be completely overwhelmed and remain in that state for some time.
10. To gradually disappear, becoming invisible or non-existent.
11. An unexpected result or negative consequence of a trend, procedure, or experiment.
12. A feeling of discomfort in the eyes.
13. Something that causes harm or damage (adjective).
14. To bring something to a worse or lower state.

Task 4 True or False?

Read the statements below and indicate whether each one is true or false. If a statement is false, find the correct information in the text.

1. According to the text, the real world is described as stable and unchanging, making virtual reality an attractive place to escape to.
2. Technological development has declined, facing many challenges and slowing down after the COVID-19 pandemic.
3. As a game-changer, virtual reality has brought numerous benefits, enhancing not only the overall experience but also contributing to people's emotional and physical well-being.
4. Virtual reality has become ubiquitous. Major global tech companies have popularized it through modern technologies and VR equipment, making it accessible in the workplace.
5. Virtual reality offers numerous practical advantages and is often perceived as low-risk environment without potential drawbacks.

6. Virtual reality is highly immersive. Many people who have tested VR equipment find some difficulty re-engaging with the real world on a psychological level.
7. The author was not particularly impressed with the VR equipment.
8. Close contact with virtual reality through VR equipment can lead to physical discomfort and even pain.

Task 5 Answer the questions

1. Why did COVID-19 – and the pandemic in general – contribute to the development of virtual reality?
2. What problems are associated with staying in virtual space? How does the author challenge stereotype that virtual reality is an entirely positive phenomenon?
3. Who is interested in the development of virtual reality, and why?
4. Why does virtual reality generate uncertainty? How can people with experience in virtual spaces become disoriented in the real world?
5. What unexpected side effects might a person testing VR equipment experience? What type of feeling might this cause?
6. How can virtual reality benefit various sectors and industries? In what ways can it improve the workplace?
7. What conclusion did the author draw after comparing work in virtual and real environments?
8. Why is working in a physical environment preferable? What benefits can employees gain from doing their tasks in real space rather than in virtual reality?

Task 6 Video Watching

A. What do you know about smart glasses? Have you ever used them? How can smart glasses help you in everyday life or in extraordinary situations? What other benefits of smart glasses can you imagine? Discuss your ideas with your classmates.

B. Find the video on YouTube: “Will Smart glasses eventually replace smartphones?”// BBC News.

https://m.youtube.com/watch?v=YbAHeZLE_XE&pp=ygUIV2lsbCBTbWFydCBnbGFzc2VzIGV2ZW50dWFsbHkgcmVwbGFjZQ%3D%3D

Translate the keywords before watching the video.

to tout, are often touted, CES, flash up before our eyes, blank book, stuck on, downturned gaze, a glitch, battery life, an extra three charges, swipe the side, the show floor, to amplify, a little bit tiny sound, to tap, to adjust the brightness, brightness adjustment.

C. Watch the video and answer the questions:

1. Why are smart glasses often described as the next major technological advancement after the smartphone?
2. What does the presenter say about the functionality of smart glasses? How many technical advantages of the device are presented?
3. How does the video highlight the role of the AI component? What educational, linguistic, and cultural functions do smart glasses offer?
4. How powerful is the battery in smart glasses, and how long can it keep the device running?
5. What benefits of audio smart glasses impressed the speaker, and why? How do these glasses perform under various conditions, such as in noisy environments?
6. What might happen to the quality of the sound? How can smart glasses interact with the voice of the person you are listening to?
7. What additional functions and models of smart glasses are presented in the video? How do features like color change and brightness adjustment turn the device into a fashion accessory?

Use of English

Task 7 Nouns

A. Answer the questions.

1. What is the role of nouns in Formal English?
2. How can we create nouns using verbs and adjectives? Give some examples of nouns based on adjectives and verbs.
3. How can suffixes help you transform words into nouns? How can prefixes be used for the same purpose?
4. How can nouns help you define various technical phenomena? Give some examples.

B. Create nouns using the words listed below and fill in the gaps.

To compete, credible, to develop, to grow, to be able, to achieve, popular.

The IT industry is one of the most promising fields today. Its 1 _____ is driven by opportunities for rapid personal 2 _____, 3 _____, and fast career advancement. The 4 _____ of IT professionals directly correlates with their qualifications and talents. Their natural 5 _____ to work with information and programming languages also plays an important role. The greatest 6 _____ of top IT professionals enhance the industry's 7 _____ among newcomers pursuing a career in IT. Well-known companies have many affiliates and offer opportunities that attract young professionals who want to work online from their hometowns.

C. Use one word from the list of nouns and fill in the gaps.

Attraction, ability, demand, development, goals, challenge, qualities, way.

Although high salaries are, of course, the main 1 _____ for young professionals, finding a true calling in the IT field remains a significant 2 _____. IT specialists should choose their field of activity based on their interests, strengths, and life 3 _____. Many IT professions offer a solid foundation for career 4 _____. An IT specialist can often switch between different areas of professional activity to develop their skills and personal 5 _____ in the best possible way. Although IT encompasses many areas, programming continues to lead the field. Many specialists choose this path, and the best among them — those who can quickly master new programming languages — are always in high 6 _____. Areas such as data science, data analytics, and system administration also play a vital role in the IT industry. In addition to technical expertise, IT workers should develop strong personal qualities. The 7 _____ to work not only with computer systems but also with users will make any employee a strong candidate in the job market.

Task 8 Word formation

A. Think about how nouns can be used to define technical states, digital tendencies, or other Internet-related things. Divide all nouns listed below into categories:

a) Technical phenomena (for example, **relativity**); b) Technical states (for example, **data integrity**); c) Technical functions, benefits (for example, **security, reliability**).

Accessibility, administration, correlation, authentication, data integrity, reliability, simplicity, originality, novelty, interception, Cyber intrusion, network/broadband connection, data conversion, safety, security, business/artificial intelligence, usability, functionality, accessibility, complexity, availability.

B. What suffixes can we use to create nouns? Create more examples of nouns and add them to the categories below.

a) Technical phenomena: **disconnection**, encryption, diversification...

b) Technical states: vulnerability, susceptibility...

c) Technical functions, technical qualities: scalability, portability...

Task 9 Nouns in Formal English

A. Rewrite the sentences below in a formal style by replacing all underlined words with their corresponding noun forms. Use appropriate prefixes and suffixes to form the required nouns.

1. We were surprised because he *refused* to participate in such a promising project.
2. They *agreed* unexpectedly and it helped the whole project. 3. *Mr. Atkinson proposed* reducing the price of the new mobile phone model, and we approved the proposal. 4. My business partners didn't want to *participate* in testing the new VR equipment, saying it might not be safe. 5 I explained that my messages were sometimes delayed, so I *stopped using* this email service. 6. She said she *did not like* street polling because *few people took part*. 7. James said he *did not approve* of the project, which involved people participating without compensation. 8. They know that we *were dissatisfied* because they reduced the number of awards.

B. Rewrite the sentences below using the words in brackets.

Example: 1. The products from the subsidiaries *are getting popular*. (There is a *rapid growth in the popularity of* the products supplied by the subsidiaries). 2. The number of data breaches in our company has decreased since all users were informed about Cyber threats and risks. (*We have seen a reduction in...*). 3. It's risky to install software without checking it first. (...*may carry a high risk*). 4. Far fewer high-volume engines have been produced over the past ten years due to environmental protection requirements. (*decline in, production*). 5. Residents of remote regions still lack reliable access to high-speed internet, which significantly hinders the development of rural communities. (*The lack of free access to...*). 6. He said that an old telephone tower could be used to distribute high-speed internet, and he successfully implemented it. (*He proposed the idea of using...*). 7. Although launching internet access in a remote region was challenging, we successfully

completed the project. (*The difficulty of launching...*). 8. What concerns us most is achieving a balance between battery capacity and device compactness. (*The trade-off between...; top concern.*)

Task 10 Writing a summary

A. What is a summary? What do you know about writing a summary? Read the instructions below and make short notes.

1. A summary is a concise version of a text, article, book, or video that presents its main points while preserving the original structure, chronology, and key details.
2. At the beginning of a summary, you should mention the author's name and the title of the article, book, or video.
3. It is essential to present the main idea of the original text in a summary, along with the author's key points and arguments. To achieve this, we can use reporting verbs such as: *The author explains, suggests, states, analyzes, compares, and presents*. For a formal style, passive constructions may be employed, for example: *The readers are informed about..., In the final part of the article, the results are interpreted as..., At the end of the text/video, the problem is analyzed from a social perspective*
4. A clear structure and chronological order will also help you write a summary with clarity and precision.

B. Write a summary (7–10 sentences) of the video from Task 6. Use the guidelines listed above.

Unit 7

Surveillance in Cyberspace

Task 1 Lead-in

Read and discuss the introductory statements. Do you agree or disagree with them? Add any relevant information you may have about the facts presented. Provide your comments on each statement.

1. Today, we have numerous high-tech devices for various types of surveillance. Street cameras, CCTV cameras, number plate recognition services, and Internet Surveillance help us to maintain security, providing safety for society.
2. High-precision street video cameras can monitor cars and pedestrians, deterring illegal or criminal activity. Street surveillance discourages offenders because they cannot hide their illegal actions.
3. The use of video surveillance in buildings, social institutions, and offices disciplines staff and visitors. Video surveillance helps you control your emotional state.
4. While many people believe that video surveillance enhances safety, others have the opposite view. Video surveillance opponents regard it as an invasion of privacy, feeling uneasy under the constant watch of numerous CCTV cameras. It reminds them of Orwell's warning: "Big Brother is watching you."
5. The trend of avoiding video surveillance and internet tracking is gaining popularity. People are adopting various strategies, such as wearing dark clothing and sunglasses, covering their faces, and practicing cautious behavior online to protect their privacy.
6. The impossibility of remaining anonymous in both the physical world and cyberspace encourages people to follow proper ethics and rules, preventing unwanted incidents.
7. It is essential to strike a balance between the security provided by surveillance and individual freedom, which should be limited as little as possible.

Task 2 Reading

Read the article and translate the keywords in bold.

Challenges of video surveillance and how to avoid them

By Max Burkhalter

January 27, 2022 <https://www.perle.com>

Protecting homes, businesses and communities from external threats is **a top priority** for many. One of the easiest solutions is installing a video surveillance system – video cameras **attached to** watched monitors that track **intruders** – so that any threats may be witnessed and potentially even stopped before they take place. The surveillance technology market is continuing to grow.

We know that surveillance can deter theft and other crimes, and that these cameras can provide evidence when **perpetrators** do act. There's a certain amount of trust we place in surveillance, to operate effectively and efficiently, to provide valued data and to be **vigilantly** watched. Indeed, most have become so used to video surveillance it's almost second nature to rely on the camera that sees all. Given the dependency on these systems, however, it's worth taking a look at a few challenges that still exist in recording and using video surveillance and how **to eliminate** them.

Challenge: Data loss. Because there is so much **reliance on** surveillance systems, data loss in the event of system failure or external circumstances can be **detrimental**. Residential and commercial use of security cameras requires the recording to be well documented and secure, so that information isn't easily lost.

The solution: The easiest way to resolve this issue, of course, is **backing up the data** on a cloud-based system. If the camera itself or the backup drive is **compromised** there will be an additional copy for authorities to review. When Perle (organization) aided Ali Controls in linking their security camera to the cloud, the system was innovated **to rely on** solar power for a continued and reliable energy source. **Data loss** was prevented with a cloud backup solution.

Challenge: Operator issues. Those who are responsible for watching video surveillance are only human, which means there can be opportunities for criminals **to sneak into their blindspots** or attack when operators aren't alert. In these cases, video surveillance can **fail to accurately capture movement and track crimes** as they occur.

The solution: It may seem like it's out of the future, but it's actually quite normal. AI is shaping the controls of surveillance, Forbes reports. AI tech can map and track occurrences. Combined with self-learning abilities, AI is able to improve upon human operations and analyze video footage in real time – even alerting the police if **suspicious occurrences** become apparent.

Challenge: Power failure. If the power goes out, and a surveillance system operates on WiFi, a camera's chances of catching anything on video are **compromised**. While there is a dependency on many power systems, there are some **operational inefficiencies** that are simply out of our control.

The solution: Connecting a security camera to another point of power or with a **fallback network** can keep operations running in the event of an outage. In some cases, connecting to electrical or solar power can **alleviate this problem** as can connecting to LTE coverage. [7]

Task 3 Vocabulary

Find the keywords in the text that match the definitions below.

1. The most important aspect of personal interest.
2. Fixed or connected to something.
3. A person who violates the boundaries of personal space.
4. To prevent someone from committing a crime.
5. In a careful manner, giving maximum attention (adverb).
6. Automatic copying of information that prevents its loss.
7. A state of dependence, usually negative.
8. To enter areas that are not monitored by cameras or located outside the surveillance zone.
9. To be ineffective in recording evidence of a crime.
10. Potentially harmful processes identified by AI.
11. A network that works in case of a technical problem.
12. To resolve a problem.
13. Criminals.

Task 4 True or False

Read the statements below and indicate whether they are true or false. If the statement is false, find the correct information in the text.

1. The video surveillance industry is experiencing significant growth and is currently in high demand.
2. Operators give little attention to video surveillance data, which are stored in a general archive with other information.
3. The video surveillance system prevents data loss by replacing missing data from another node.

4. AI is responsible for managing video surveillance. Criminals can be detected, as there are no unmonitored areas in the surveillance zone.
5. AI can track and even predict criminal activity. In cases of suspicious behavior, it alerts the police.
6. If the electricity goes out, the surveillance system operates using a power bank connected via Bluetooth.
7. A backup network can support the video surveillance system during blackouts.

Task 5 Answer the questions

1. What is the purpose of using video surveillance? What are the main benefits of this service?
2. How can video surveillance reduce the number of criminal incidents? What impact does it have on potentially illegal behavior?
3. Why is data loss considered one of the most serious problems? How does it affect the operation of a video surveillance system?
4. How can data loss be prevented? What reliable solutions can help improve data security?
5. Can human factors contribute to failures in video surveillance systems? Is it possible for an operator to effectively monitor all surveillance zones?
6. What is the role of AI in video surveillance? In what ways can it improve the quality and efficiency of the service?
7. What technical faults commonly occur in video surveillance systems, and how can they be addressed?

Task 6 Video Watching

A. Find the video on YouTube: “Feds warn of vast surveillance of your online data” // NBC News

https://www.youtube.com/watch?v=_zN6k2wqSZs

B. Before watching the video, answer the questions:

1. What is the role of internet surveillance? Why is user data collected? How can internet surveillance benefit commerce, advertising, and targeted marketing?
2. Is it possible to remain anonymous on the Internet? Who benefits from online anonymity, and who does not?
3. Who is motivated to improve the quality of internet surveillance, and why?

C. Translate the keywords and watch the video:

Vast surveillance, marital status, fail to protect, to expose users to a range of threats, identity theft, criminal stalking, third parties, refute, decline to comment, security pros, digital footprint.

D. Watch the video again and answer the questions.

1. What do the feds call the data collection process?
2. What kind of data is collected?
3. What is the main purpose of data collection?
4. Is it always possible to protect user data?
5. What kind of dangers might the most vulnerable categories of users experience?
6. What does Congress need to improve security?
7. What did Mark Zuckerberg say in defense of his company?
8. How are positions of online advertisers and security pros compared in the video?
9. What does the presenter say about removing digital footprint?

Use of English

Task 7 Negative prefixes

A. Read the grammar rules and make short notes.

We can use negative prefixes to form new words with meanings opposite to the original. These prefixes serve different purposes, allowing speakers and writers to avoid lengthy descriptive constructions when referring to opposing ideas. Common negative prefixes include im-, mis-, dis-, ir-, il-, un-, under-, mal-. They are often used to create both nouns and adjectives. Using negative prefixation enhances accuracy and precision in language. It is suitable for both spoken and written communication. *Examples:* The football player *was disqualified* in the fourth minute of the match due to a light kick to an opponent in the penalty area. The robbery victim *was completely dissatisfied* with the quality of street surveillance in an area known for pickpocketing.

B. Fill in the gaps using the words in brackets with the correct negative prefixes.

1. A _____ (to function) video camera can compromise the safety of pedestrians in areas where pickpockets are common.

2. The importance of cautious behavior is often _____ (to rate) due to the widespread use of video surveillance. CCTV cameras cannot capture every incident.
3. The _____ (to organize) process of gathering and storing data was the result of _____ (to staff) issues. Only two operators were responsible for monitoring video surveillance in the city center.
4. The _____ (complete) of the video data set made it impossible to provide a picture of the incident.

C. Match one word from the list below with one suitable prefix to complete the sentences. Sometimes you can use the same prefix more than once.

anti-, ir-, mal-, non-, pre-, pro-, post-, over-, un-, under-

1. date, 2. Internet, 3. replaceable, 4. European, social, 5. industrial, 6. statement, 7. estimated, 8. administration, 9. existent, 10. refutable, convinced

1. Manual checks at security checkpoints _____ the implementation of video surveillance systems.
2. Cable telephone, telegraph, letters, and holiday leaflets were the means of communication for people in the _____ era.
3. The fallback network is an _____ component of a video surveillance system.
4. All _____ candidates discussed the lack of video surveillance in public areas. They supported the trend of counteracting any form of _____ behavior in public places.
5. Digitalization has revolutionized the production of food and essential goods in the _____ era.
6. To say that video surveillance helps control criminal activity would be an _____.
7. We may _____ the benefits of internet surveillance. Pop-up windows, adverts, and cold calls cause a lot of inconvenience to users. We should focus on the side effects of surveillance.
8. The new director will improve the technical infrastructure in our company. The poor quality of video surveillance in the building is a consequence of the company's _____.
9. In science fiction, many authors describe _____ technologies that may become reality in the future. George Orwell outlines a system of surveillance in his famous novel *1984*.

10. With _____ video evidence, the robbery seemed easy to investigate, and only the old detective remained _____. He had seen quite a few surprises in his long career.

D. Read the instructions and make short notes.

We can use words with prefixes in storytelling for various narrative purposes. The prefixes *pre-* and *post-* help indicate chronological order, for example: *pre-digital era*, *prehistory*, *post-war generation*, and *post-project analysis*. Prefixes expressing negation or opposition allow writers to convey contrasting qualities or processes concisely. Instead of lengthy descriptive phrases, a single prefixed word may be used, such as *malfunctioning*, *maladministration*, *unreliable*, *anti-establishment*, *non-conformity*, *underrated*, *insecure*, *misinterpret*, or *misbehavior*. Prefixation enhances clarity and stylistic precision, especially in essay writing.

E. Complete the story with the words given below.

Anti-hacking, pre-digital, post-classical, insecure, immortalized, irreplaceable, overexposed, understatement.

Issues of control and security are among the most important problems in society. These concerns have had both social and technological aspects since the beginning of civilization. To say that the issue of control can sometimes be controversial would be an 1 _____ .

One of the first people to implement passwords and codes in 2 _____ times was Julius Caesar. He encrypted his messages using a special cipher. Those who intercepted them often failed to understand their meaning. Sometimes Julius Caesar used metaphors and figurative expressions. Over time, history 3 _____ his famous words — many of which now appear on classic lists of Latin phrases studied in various countries. Mathematicians used the Caesar cipher in the 4 _____ era, developing algorithms and methods of text obfuscation based on it.

In our time, experienced hackers can crack almost any code within an hour. Total surveillance makes every user feel 5 _____. Therefore, we cannot rely solely on 6 _____ software if our sensitive data are not encrypted. Moreover, anyone whose data are 7 _____ on the internet can become a victim of hacking. Experts say that basic computer education is 8 _____ for users who want to avoid potential cyber threats.

Task 8 Writing a review

Video blog review on a technical topic

A. Read the instructions and make short notes.

Writing a video blog review can be a regular task for a tech professional or scientist whose duties include observing new inventions, technological solutions and trends in the digital world. In a review, you should present someone else's ideas while maintaining objectivity. A video blog review allows the author to present analytical insights and well-supported conclusions while maintaining professional objectivity.

B. Read the text and fill in the gaps with words from the list below.

Clearly, concluding, despite, compelling, focusing, light, prevalence, main, preference, specifically.

This video was *filmed* 1 _____ *for* viewers interested in the latest digital trends. *It contains* a set of recommendations on how to understand the specifics of Internet Surveillance. *It will be helpful for students* to generally assess the problem of surveillance, its actuality, and 2 _____ rate.

The main idea is 3 _____ *defined* at the beginning of this video. The author presents all aspects logically step by step, which helps structure the material being analyzed in this video.

Like the previous video, this one maintains a 4 _____ style, using examples and facts, while also 5 _____ on several episodes with illustrative images. They demonstrate the impossibility of remaining anonymous and private on the Internet.

The part about the omnipresence of surveillance reflects modern ideas in this area and presents the author as a 6 _____ opponent. The 7 _____ remarks contain experience-based arguments. They provide the YouTube audience with food for thought and encourage them to view the problem from a different angle.

However, as a personal 8 _____, including more situations with real people would have added valuable, experience-based content to the video. I would have placed greater emphasis on both the benefits and potential

drawbacks of surveillance. This approach could attract a wider audience, especially those from non-specialized backgrounds. 9 _____ this personal comment, the video is highly 10 _____. It is worth watching and subscribing to the author's YouTube channel.

C. Answer the questions according to the text in Task 8B.

1. Is the review generally positive or negative? What linguistic signs indicate the author's attitude?
2. What is the structure of the review? What function does each paragraph serve?
3. Why were the final two paragraphs included?
4. Identify the adverbs used in the text. What is their function? Can you suggest additional adverbs that would strengthen the review?
5. How is the author's personal viewpoint expressed? What words or expressions are used?

Unit 8

Money Matters Online

Task 1 Lead-in

Read and discuss the introductory statements. Do you agree or disagree with them? Add any relevant information you may have about the facts presented. Provide your comments on each statement.

1. Today, online banking is gaining popularity, as people prefer to use an app instead of standing in line at a physical bank.
2. While online banking offers convenience, it also comes with Cyber threats. Users are concerned about the safety of their financial data; therefore risks such as fraud and hacking make online banking unsafe.
3. Online banking reduces the use of cash and digitalizes the process of purchasing goods, making it harder to control how much and how often we spend.
4. Online banking may lead to the disappearance of cash. While many people accept this trend, others are seriously concerned. Some economists predict negative outcomes.
5. Online banking accelerates the global trend of hyper-commercialization by enabling companies to promote their brands and reach their target audiences. It fuels consumerism by encouraging more frequent purchases.
6. Online banking facilitates quick purchases and financial transactions. However, it also contributes to the growing trend of user data collection, raising serious concerns about privacy and security.

Task 2 Reading

A. Before reading the text, define online banking in your own words. What are the benefits of online banking? Consider the common problems that bank account holders may face.

B. Read the text and complete the gaps using the words from the list below. Then, translate the keywords.

Staying Safe with Online Banking

Enroll, features, fraudulent, hold, identity, mortar, programs, takeover, ubiquitous, withdraw.

Standing in line to 1 _____ cash at a traditional bank branch is considered an anachronism in an age of 2 _____ gadgets and pervasive digital technology. Brick-and-3 _____ banks are less convenient than online banks, which are gaining popularity worldwide.

Online banking offers a range of services that help you manage your transactions. The most functional services include online payments, transfers, bill payment 4 _____, and electronic statements.

You can withdraw cash from an ATM, make an online purchase, and then monitor your activity using e-statements, which show all expenses and charges. In the case of a withdrawal you didn't make, an e-statement will alert you, and you can contact the bank to resolve the issue.

Online safety is a top priority for every bank. To prevent risky situations, online banking services provide various safety 5 _____. Automatic account lockouts block access to your account when cybercriminals attempt to guess your password. You can also use account alerts to detect any suspicious activity on your account.

Bank fraud, financial fraud, account 6 _____ fraud, 7 _____ theft, and password theft are among the most common threats to online banking.

You can also 8 _____ in an online payment 8 program to make your transactions safer and more convenient. Signing up for an online banking course can increase your awareness of online risks and teach you how to avoid them. In case of any 9 _____ activity on your account, you should call your bank and ask them to place a temporary 10 _____ on your account.

Task 3 Vocabulary

Find the keywords in the text that match the definitions below.

1. A gadget or technology that can be found everywhere.
2. A physical building of a bank branch where visitors can come in person to resolve financial issues.
3. A service that allows you to pay bills automatically on a fixed schedule.
4. To take money out of a bank account using an ATM and a plastic credit card.
5. A service that informs you when and how much money you have withdrawn, transferred, or spent.
6. Functions that provide safety.
7. A security feature that automatically blocks your account in case of a Cyber threat or suspicious activity.
8. A security feature that alerts the user of a danger or threat to the account, often by sending a message or activating a signal.
9. The illegal manipulation of the online banking system.
10. An illegal action that involves breaking into and taking full control of a personal account.
11. Fraudulent activity involving the theft of personal data to commit illegal acts.
12. To officially add your name to a list in order to participate in an event or program.
13. An adjective that describes an illegal or dishonest activity.
14. To officially block a user's bank account in case of danger or a Cyber threat.

Task 4 True or False

Read the statements below and indicate whether they are true or false. If the statement is false, find the correct information in the text.

1. Traditional street banking remains as popular as online banking services.
2. The widespread use of devices and technical equipment has contributed to the development of online banking.
3. Tracking scammers' activity is one of the advantages of online banking nowadays.
4. Electronic statements can help users transfer money to another country.
5. Cash withdrawal is the procedure of getting money from an ATM with the help of your plastic credit card.
6. The most common safety features of online banking include account alerts, automatic account lockouts, and temporary holds that prevent suspicious activity on your account.
7. Account takeover is one of the safety features.
8. Enrollment in an online banking course is a common form of financial insurance that provides compensation in the case of online threats.
9. Fraudulent activity is a reliable method of protecting a user's account.

Task 5 Answer the questions

1. What are the main advantages of internet banking compared to traditional banking?
2. What online banking features can you use to manage your account and financial transactions?
3. What are electronic statements typically used for? What types of banking fraud can they help uncover?
4. What are the most common security features and services of online banking?
5. Have you ever experienced automatic blocks or notifications on your account? If so, what did you do to resolve the problem?
6. What types of online banking threats does the author mention in the text? Which of these threats have you or your friends encountered?
7. Have you ever enrolled in an online banking program or participated in a related event?
8. How can a temporary hold help protect your account?

Task 6 Video Watching

A. Find the video on YouTube: “Online Banking: Tips and Tricks to keep your money safe”// Connectability IT Support Toronto.

<https://m.youtube.com/watch?v=mIT1Sq1Eygc&pp=ygU-b25saW5lIGJhbmtpbmcgdGlwcyB0byBrZWVwIHlvdXIgbW9uZXkge2FmZSBpdCBzdXBwb3J0IHVcm9udG8%3D>

Answer the questions before watching the video:

1. Have you ever been a victim of online banking fraud? Do you know how to avoid it?
2. What security practices should every online banking user adhere to? What actions should you avoid to minimize risks when banking online?

B. Translate the keywords listed below and watch the video:

Hesitant, it should beat standing in line at the bank, risk-free, expose your data to, with no scruples, chances of breach, camp out, tucked into their backpack, capitals and lower case letters, stay tuned, brick-and-mortar bank branch.

C. Watch the video again and answer the question:

1. What was the main advantage of online banking that the presenter mentioned at the beginning? What other online banking services did the expert discuss?
2. Why does the presenter say that online banking is not risk-free?

3. Can public Wi-Fi be unsafe for users? How can thieves create the illusion of legitimate public Wi-Fi, such as at Starbucks?
4. Who do some people still share their PIN with? Why might this be dangerous?
5. How often does the presenter change his password? How many characters should it contain, and what kind of characters?
6. How often do you prefer to change your password? What words should you avoid when creating a password?
7. What is the role of the lock icon? How can text alerts help you keep your account secure?
8. When should you contact the bank directly?

Task 7 Vocabulary. Technical issues

A. Choose one suitable word and fill in the gaps.

Compatibility, distortion, failure, faulty, issue, acting up, life, manufacturing, performance(x2), obsolescence.

1. We were unable to withdraw cash from the ATM due to a technical _____ in the system, which showed an error page. So, we went to the nearest brick-and-mortar bank branch.
2. I have bought a new smartphone, but now it's _____. Should I restart it?
3. A _____ Wi-Fi adapter caused connection problems that no one could have suspected. Everyone in the hotel remained disconnected throughout the day.
4. Temperature fluctuations and overcharging of your device's battery may cause it to malfunction, which will shorten the battery _____.
5. If you want to save money, buy a gadget from the discount section; however, the functionality and technical _____ of this device may be low.
6. Due to an increase in _____ defects, the development team has warned that they may end the partnership that has existed since the start of the financial crisis.
7. Battery _____ is one of the most important technical characteristics of any gadget designed for long-term use.
8. Without updating, computer equipment becomes useless: _____ remains one of the biggest challenges of the digital era.
9. If you want to use the latest app, please check the technical characteristics of your phone to avoid _____ issues. The new app requires much more RAM and processor power than the current version.
10. A system _____ made it impossible to launch an online survey. We wanted to know how popular the idea of banning e-scooters is.

11. My sister is unhappy with the indoor photos she took with her newly purchased smartphone. Photo _____ is a common problem with phone cameras. You can fix it with the help of a photo editing app.

B. Match the keywords with the definitions provided below.

Development team, it's acting up, manufacturing defect, obsolescence, phone photo distortion, technical performance, technical issues.

1. A situation where your smartphone still functions, but not properly.
2. An optical effect that causes a photograph to appear dark or blurred.
3. Technical characteristics.
4. A group of specialists involved in the design and modeling of new devices at the pre-production stage.
5. Minor errors, bugs, or insignificant faults that cause your device or equipment to malfunction.
6. A technical failure in factory assembly and configuration, usually found in a new device.
7. A physical condition that makes your device unable to meet current technical requirements.

Use of English

Task 8 Adjectives and Modifiers

Read the grammar rules and make short notes.

We can use adjectives with modifiers to define, emphasize, or exaggerate features and qualities, depending on the context and the purpose we aim to achieve. Adverbs can be divided into categories suitable for gradable or non-gradable adjectives. For example, very, quite, a bit, hugely, slightly, reasonably, and extremely can be used with gradable adjectives (e.g., very angry, a bit tired, rather cold, extremely sophisticated, very relieved, too busy, highly significant, quite challenging, very impressive). The other category of adverbs includes words such as absolutely, completely, entirely, simply, practically, and virtually, which are combined with non-gradable adjectives (e.g., absolutely fabulous, absolutely perfect, entirely impossible, completely wrong, simply awful, totally exhausted, completely full, totally silent, utterly unique). Some adverbs, such as really can be used with adjectives from both categories (really cold, really tired, really relieved; really impossible, really essential, really exhausted, really amazed).

A. Read the sentences below and fill in the gaps using the adverbs listed. Think about the role of adverbs. How do adverbs modify the meaning of adjectives?

Incredibly, justifiably, pretty.

1. When online banking first appeared, many people were hesitant to use it, _____ concerned about security.
2. Online banking is _____ safe; however, we need to know how to avoid potential threats.
3. It's _____ easy for a hacker to create the illusion that you are using public Wi-Fi.

B. Use appropriate modifiers to complete the sentences. Then, identify the category of each adjective (gradable or non-gradable).

Completely, reasonably, simply, slightly, very.

1. The company widely advertises a new smartphone model, offering a discount and an online purchase program. Therefore, we can buy a _____ priced gadget.
2. The fact that hackers can easily imitate public Wi-Fi to track every step of the user who connects to it is _____ awful. Their methods are _____ sophisticated. They consistently improve phishing techniques and bank fraud strategies.
3. We can install an online payment program _____ free of charge. It offers many discounts. However, a hacking attack _____ damaged our computer system, so we need some time to restore it before the installation.

C. Read the dialogue and fill in the gaps using the adverbs provided.

Absolutely (x2), completely, incredibly, quite (x2), slightly.

1. A: Have you heard the news? Our city bank is opening a new branch specifically for small businesses. Running a company during a financial crisis is an _____ challenging task.
2. B: Our company has survived the financial crisis, which is a good sign of stabilization. I think it might lead to a new wave of bank fraud, which is _____ predictable.
3. A: No! You are wrong. During the crisis, we improved our security system. It will be _____ difficult for thieves to break in. I'm sure that surveillance will help us detect suspicious activities.
4. B: Oh! Hackers will be embarrassed and _____ furious. You know, I am concerned with safety issues.
5. A: Don't worry! It takes some time to find security flaws. Have you seen our new tech lab? It's quite nice, because the old one was _____ useless.

6. Yes! It's larger and located in a high-tech building overlooking the central city park. The concierge is very friendly, and I feel _____ comfortable working in this lab!
7. There's a cafe next to it, which inspires me a lot. It's _____ marvelous.

Task 9 Conditionals

A. Read the grammar rules and make short notes.

We can use conditional sentences in a technical context for a variety of purposes. The First Conditional is used to describe a predictable result that is a logical outcome. It can also describe the predictable outcomes of technical processes or digital activities. This structure is also commonly used to give warnings or instructions. For example: *If you set the wrong equality constraint value, the robot will not move correctly. If your operating system becomes more susceptible to viruses and failures, it will require technical maintenance very soon.*

We use the Second Conditional to describe hypothetical situations in the present, such as an imaginary technical state of systems or devices, or to talk about possible outcomes of technical operations. For example: *If we had a backup service, it would automatically save the information during blackouts. If the system administrator installed AI-based security software, the number of hacking attempts would be lower.*

We can use the Third Conditional to describe hypothetical situations in the past and to express regrets:

- a) *If the company hadn't released proprietary software, it would have gone bankrupt.*
- b) *If I had used more reliable equipment, I would have finished the security system test earlier.*
- c) *If I hadn't forgotten my glasses, I would have read the conference announcement and registered on time.*
- d) *If I hadn't been so pushy, we wouldn't have missed several bugs during the system testing.*

B. Match the two halves of the sentences.

1. If the magnetic storm had not distorted the radio signal, ...
2. If we had taken more responsibility for the project, ...
3. If the developers had not equipped the mobile device with a high-resolution camera, ...
4. If I had been more qualified, ...
5. If my assistant had instructed me earlier, ...

6. If scientists had developed digital tracking in the 20th century, ...

a) our sponsors would have increased the investment program and subsidized more candidates from our company. b) I would have used another tech strategy to outpace our competitors in the digital market. c) we would have been able to use mobile phones in the mountains. d) I would not have copied these boot files from an unlicensed source. e) it would not have become so popular among professional photographers. f) the police would have caught more criminals.

C. Complete the sentences using your own words.

1. If I hadn't been so scared by the prospect of a debate, I _____ .
2. If I hadn't forgotten to activate autonomous power mode, we _____ .
3. If we had provided subtitles, this video blog _____ .
4. If we had used _____, the drone wouldn't have reached the desired speed.
5. If _____ we would have arrived on time by using e-scooters instead of taking the bus, which got stuck in a traffic jam.
6. If we hadn't been expecting our chief manager to arrive for the meeting, we _____ .

D. Match the two halves of the sentences.

1. If we are going to provide a proper testing environment, _____ .
2. _____, you will not be able to continue using the free trial version.
3. If we haven't bought the PC components by next month, _____ .
4. If you follow my advice and finally switch to another OS, _____ .
5. _____ we will have androids with capabilities approaching the human level in the foreseeable future.
6. _____, we will invite a bug bounty hunter from the Data Security Center to find weaknesses and system vulnerabilities.

a) If you remove this app; b) you will avoid many problems, such as crashes, frozen apps, and vulnerability to viruses; c) If AI developers make significant progress in deep learning; d) the vendors will cancel the discount; e) we will need more upgraded software; f) If the current security test fails.

E. Match the two halves to complete the sentences.

1. If strong human-like AI were to become available, _____ .
2. If I were able to work with this programming language, _____ .

3. _____ if we installed a one terabyte hard drive?
4. If it weren't for system administrators, _____ .
5. Would it be beneficial to use a more powerful battery in a new version of a mobile phone _____ ?

a) I would create the application we need; b) Would this mobile device function properly; c) it would radically change all social spheres; d) the scientific events would be disorganized; e) if we had an appropriate tech license.

Task 10 Writing. Linking words

A. Read the grammar rules and make short notes.

Linking words are special words used in writing for various purposes. Their main function is to clarify the structure of a text. They help indicate different parts, such as the introduction, the body (which may include several sub-parts or paragraphs), and the conclusion. We can use linking words to organize paragraphs in a logical order. This order can be straightforward or mixed. Some linkers show cause and effect, others indicate contrast, and some emphasize the reason.

B. Read the two parts of the text and fill in the gaps with suitable words from the list below.

Part 1

After, as soon as, at the moment, since, so.

As a young man, my uncle Jim always wanted to become a detective. He was a huge fan of the Sherlock Holmes stories, 1 _____ he decided to enter the Faculty of Law. His family belonged to an old financial dynasty in which banking was the dominant profession. 2 _____ our grandmother discovered that my uncle had decided to take a different path and become a detective, she was deeply upset and rejected his idealistic ideas. She brought the issue up at a family council. My uncle hoped that some family members would support him and did not give up. 3 _____ when he was returning home, we informed him of a radical decision. 4 _____ he entered the house, he realized that he had no choice, he had to abandon his dream. 5 _____ he saw our grandmother, he didn't know what to do. He prepared for the worst and gathered all his strength... The memory of that day stayed with him for years.

Despite, eventually, finally, since then.

After many years, I 1 _____ met my uncle, who lived in another city. 2 _____ the long time that had passed since we last saw each other, he recognized me immediately. My uncle became a financier and moved to a big city. He didn't forget his dream and 3 _____ got a position in the cybersecurity department. 4 _____, he has been working at a bank as a cybersecurity analyst, investigating dangerous sources of cyber threats. My uncle managed to combine his desire to become a detective with a practical specialization, which he has successfully mastered.

C. Write about your experience of dealing with online banking issues. Use linking words and phrases to create a clear structure for your story (up to 10 sentences).

Unit 9

The Internet Now and Then

(A Brief History of the Internet Development)

Task 1 Lead-in

Read and discuss the introductory statements. Do you agree or disagree with them? Add any relevant information you may have about the facts presented. Provide your comments on each statement.

1. The Internet has radically changed the world and society. It has influenced global politics and the living environment. Everything has changed under its influence — from our daily routines to science, art, and philosophy.
2. Despite its benefits, the Internet is an insecure channel of communication. We can find not only useful tools, but also various online threats.
3. People in many countries have become accustomed to online life and cannot spend more than a few hours without the Internet. This tendency poses a real threat to human adaptability.
4. In today's digital age, it is often difficult to identify real and fake content online. The ability to recognize true information is an important skill.
5. Every day we are immersed in cyberspace, performing operations that are essential for us. We send emails, make calls, write text messages, and watch video blogs. Yet we often fail to realize how deeply augmented reality has integrated into our lives.
6. It is difficult to say which aspect of the Internet is more important today: the technical or the social. People seek new technical capabilities that must meet social demands. As a result, the social and technical aspects of Internet development are equally important.

Task 2 Reading

Read about the basic technical and social principles of the Internet, and fill in the gaps using the keywords below. Then translate the keywords.

Key principles of the Internet as a network

Blistering, capabilities, conceivable, daring, indestructible, nodes, rapidly, facing, resemblance.

In the 1960s, developers sought to design an 1 _____ communication network, discussing this plan in the strictest confidence. The network consisted of fully decentralized computer 2 _____, with each node having equal status and no central authority. This was a key principle in the development of the Internet. Messages could be sent and received equally by any node, and data packets followed independent routes from point to point until they reached their destination. Even if some parts of the network were damaged, the message would still be delivered. The delivery route did not matter — only the final destination was important.

The Internet was developed during the Cold War, when any 3 _____ network could be a target. In 1968, scientists at the RAND Corporation presented a 4 _____ solution: a network that would be invulnerable to attacks. This small network, consisting of only four nodes, was called ARPANET.

The Internet, as a network, has undergone numerous changes. It has served as a military project, an information delivery system, a postal service, and a social platform. At one point, after the invention of email, Internet users began to deviate from its original purpose. They created one of the longest email lists of science fiction fans to exchange comments and opinions about the books they had read. However, these sci-fi enthusiasts soon found themselves 5 _____ criticism from network supervisors (ARPANET administrators), who did not approve of such use. This incident clearly demonstrated that nothing could stop the social evolution of the Internet.

As more and more users connected their computers to the network, both organizations and private individuals became members of a single, unified system. The 6 _____ pace of technological development provided greater opportunities for Internet users. During the 1990s, the Internet's importance in

society grew 7 _____. It became an integral part of social, scientific, and educational institutions. Libraries and the vast majority of businesses began using the Internet to its full advantage.

Can anyone predict what the Internet of the future will look like? It's a complex question. Most likely, it will bear little 8 _____ to the Internet we use today. Its social influence and incredible technical potential provide fertile ground for rapid and unpredictable development. From the very beginning, people have appreciated the Internet for the opportunities it offers for free and convenient communication. The absence of boundaries and restrictions, combined with increasing technological 9 _____ for social interaction, has made the Internet one of the most significant technological phenomena of our time.

Task 3 Vocabulary

Find the keywords in the text that match the definitions below.

1. A network that nothing can destroy. 2. A network that we can imagine or consider possible. 3. A constituent component of a system or network. 4. A bold and striking solution, sometimes risky. 5. To be criticized. 6. Rapid or accelerated development or growth. 7. Quickly, unexpectedly. 8. To differ from the previous one. 9. Technological potential.

Task 4 Answer the questions

Answer the questions according to the text above.

1. What role did the RAND Corporation play in the creation of the computer network that eventually became the Internet?
2. What problem was RAND trying to solve with the computer network?
3. How was the Internet designed to be an indestructible network? What principles helped make it reliable?
4. How many nodes did ARPANET have in its early stages?
5. How did the Internet evolve from a military project into a social phenomenon?
6. How did science fiction contribute to the development of the Internet? Who did the ARPANET administrators criticize for misusing it, and why?
7. How rapidly did the Internet develop in the 1980s and 1990s, and in the following decade?

8. Why has the Internet become so attractive to many people?
9. Is it possible to predict how the Internet will develop in the future?

Task 5

Read the article and answer the questions.

How The Internet Has Changed Through Time

Nov 25 2024

By Hayley Ravotti <https://www.simplex-it.com>

The internet has come a long way since its **inception**, transforming from a military experiment into a fundamental part of our daily lives. Let's take a journey through its history and see how it has evolved over the years.

It all began in the 1960s when scientists and engineers were exploring ways to share information quickly and efficiently. They created ARPANET, the predecessor to the internet, which connected a few universities and military sites. This network allowed computers to communicate with each other, laying the groundwork for what would eventually become the internet.

In 1971, the first email was sent by Ray Tomlinson, a computer engineer who devised a way to send messages between computers. This was a revolutionary step, making digital communication possible and setting the stage for future developments.

Fast forward to 1989, when Tim Berners-Lee, a British scientist, invented the World Wide Web. This innovation made it possible to create and browse websites using web browsers, transforming the internet from a complex tool used by a few into a user-friendly platform accessible to everyone.

The 1990s saw the rise of dial-up internet, a slow and noisy way to connect to the web. Despite its limitations, **dial-up** allowed people to access the internet from their homes for the first time. However, the speed and reliability of this connection were far from what we experience today.

By the 2000s, technology had advanced significantly. Broadband internet brought faster speeds, and the introduction of Wi-Fi allowed wireless access, making it easier and more convenient to get online. This period marked the beginning of the internet becoming an integral part of daily life.

ARPANET, UCLA, WWW, TCP, go down (the computer), back and forth, dial-up connection, plugged in, telephone jack, purchased over the Internet.

B. Watch the video and take brief notes on the key milestones in the development of the Internet. What happened in the years listed below?

1) 1962, 2) 1969, 3) 1971 (3 events), 4) 1991, 5) 1992

C. Watch this video again and answer the questions.

1. Who was J. Licklider? What idea did he come up with?
2. What happened in 1969? What was the first message sent over the network? Was the message successfully transmitted? Why or why not?
3. How many new locations (universities, cities, or countries) were connected to ARPANET in 1971?
4. Who was Ray Tomlinson? What did he invent and when?
5. When and by whom was the World Wide Web created?
6. What happened in 1992? What are Erwise and Mosaic? What role did they play in Internet Development?
7. What are the main principles of the dial-up connection? What were the inconveniences associated with this type of Internet connection?
8. What was mentioned about pizza and its relation to the Internet?

Task 7

The Internet Development: Legendary Facts

Read the statements below and indicate whether each is true or false. If a statement is false, provide the correct information from the texts and video above.

1. In the summer of 1969, American researchers began implementing a decentralized computer network. It was the prototype of the Internet.
2. The main principle of the Internet was a decentralized system of nodes, where each node had equal status.
3. RAND publicly discussed the idea of a future computer network. Experts from various scientific fields were invited to participate in the project and received public support at that time.

4. Information in the network was transmitted along independent routes to its final destination. Only the route was important.
5. The early Internet was considered highly resilient because it had many centralized nodes and could function even if parts of the network were damaged or went offline.
6. The first version of the Internet, ARPANET, was launched with several nodes, including Chicago University and the Stanford Research Institute.
7. Originally a military project, ARPANET evolved into a social phenomenon, offering services such as email.
8. Between the 1960s and 1980s, the concept of the Internet was explored by science fiction fans, who discussed it as a theme in various literary narratives.
9. In the 1990s, the Internet developed slowly.
10. What makes the Internet most appealing is its freedom, lack of limits and strict rules, and the concept of “functional anarchy.”
11. Predicting the future development of the Internet is not difficult because experts can fully anticipate the social and technological changes that will occur.

Use of English

Task 8 Reported Speech

A. Read the grammar rules and make short notes.

Reported speech is a way of expressing someone else's words without quoting them directly. Instead of using the speaker's exact words, we can paraphrase the original message. Indirect speech involves various ways of reporting, depending on the context.

- We can use neutral reporting verbs, such as *he said, she asked me, or they told us*, to present someone else's point of view factually. For example: *She said that she wasn't going to the database security conference and asked me if I could read her report on secure data retrieval.*
- We can use specific reporting verbs, such as *advise, accuse, apologize, explain, agree, offer, threaten, propose, and warn*, to better describe the particular context in which something was said. These verbs help clarify the speaker's intention and the tone of the original message. For example: *Dorothy apologized for not taking part in the conference as she had to test new search engine software.*

- Nouns and adjectives can also be used within reporting structures. Common nouns include *advice, invitation, offer, recommendation, threat, question, and issue*. Common adjectives include *annoyed, certain, sure, grateful, critical, insulting, tactful*. For example: 1. *We were delighted to receive an official invitation to visit a new high-tech library in Finland.* 2. *The head of the security department was very critical of the decision to give everyone free access to the library's online storage without identification.* 3. *The library director is unsure whether readers' data will remain safe after a massive hacker attack in the city.*

B. Choose one suitable word to fill in the gaps. Use the verbs in the correct form

Apologetic, to ask, confident, explanation, insulting, question, offer, promise, to promise, to tell, warning.

1. She _____ us that she could stay with us until the end of the conference. She also _____ to come to the scientific seminar the next day.
2. The _____ of who should be responsible for testing hardware in the company will be discussed at the office meeting.
3. The technical expert is _____ that the new failure-checking system will perform better.
4. After some hesitation, we accepted our partner's _____ to promote their manager to the role of AI Investment Curator.
5. After the conference, we received an anonymous questionnaire asking us to share our honest opinions. My opponent, who had asked me many questions, was very _____ to me during the anonymous questionnaire session.
6. We received a _____ that all security passwords for accounts will expire next month.
7. A sales representative for computer equipment failed to keep his _____ to provide regular customers with free additional memory modules.
8. Our exhibition guide, Mr. Davidson, is strict and punctual. He was very _____ when the power unexpectedly went out on the show floor.
9. We didn't believe his _____ that a system failure had caused the data leak, as we had already tested and secured the computer system.
10. She _____ me if I could help her calculate the dynamic model of an autonomous delivery robot.

C. Review sentences 1 – 10 in block B and answer the questions.

1. What reporting nouns can you find in the sentences? Which ones are followed by an infinitive, a wh-clause, or a that-clause?
2. What adjectives are used within reporting structures, and what contextual meaning do they convey — positive or negative?

Task 9 Writing a summary

A. Read the text and discuss the main idea presented in this text. Then, use the guidelines to write a summary of the text.

Social Origins of the Internet in the 1960s

The postmodern concept of the rhizome became influential in the second half of the 20th century. In biology, a rhizome refers to a type of branching root system, such as mycelium. This biological term was later adopted as a metaphor in philosophy, where it came to represent a twisted, chaotic, spontaneous and disorganized structure opposed to a traditional type of structure. It rejects all forms of strict order and hierarchy.

At the same time, the concept of the rhizome was closely linked to decentralization, a process that intensified in the mid-20th century. Many traditional principles that had existed for centuries were challenged and replaced by decentralized systems. This period marked the global collapse of empires. Decolonization, the civil rights movement, and the abolition of segregation laws all represented a fundamental shift toward political and social decentralization. In the 20th century, people and nations moved away from former centers of power, traditional social roles, and dominant ideologies. The concept of equality played a crucial role, as many countries gained sovereign political rights and people of all races were officially recognized as equal in social and legal status.

A new type of social culture emerged in many Western countries, with the feminist movement playing a particularly significant role. Men and women gained equal rights, including access to quality education and the opportunity to pursue any position in society. Women became politically active, independent, and empowered, challenging the traditional image of the man as the central and dominant figure. The trend toward decentralized paradigms developed rapidly during the 1950s and 1960s.

The concept of the rhizome and the trend toward decentralization had a profound impact on global society, postmodern philosophy, literature, and art. These ideas

shaped the worldview of many individuals during that era. Decentralization involved anti-racism, anti-imperialism, and resistance to dominance, which helped cultivate the widespread humanism of the 1960s. The rejection of centralized power and authority gave rise to ideas of peace and global unity. Peace and friendship became core values in cultural and political discourse, inspiring the music, literature, philosophy, and visual art of the time. These ideas are reflected in the works of figures such as John Fowles, William Golding, Pablo Picasso, The Beatles, Pink Floyd, and many others.

Decentralization became the driving force of political life. Many global organizations were founded on the principle of equality, including the World Health Organization, the British Commonwealth, the Organization of African Unity, and others. On an individual level, the idea of personal significance gained importance: each person was viewed as a unique and valuable individual, equal in status to any other person in the world. Both global systems and individual consciousness became increasingly decentralized in a positive sense. People preferred to live in a rhizomatic space of equal, interconnected values and principles, free from any overpowering central authority.

The principles of non-hierarchical structure and rhizomatic space correspond with the technical architecture of the Internet. It was designed as a network composed of a limitless number of nodes, all equal in status. The core idea of the Internet, which emerged in the 1960s, was based on the absence of a central authority, central node, or supervisory computer. These principles were widely accepted, and people increasingly became Internet users. Thus, the social background contributed to accelerating the development of a technical project that, under other circumstances, would have had less chance of success.

B. How to Write a Summary: Guidelines and Tips

A summary should have a clear structure, including an introduction, a main part, and a conclusion. You can use typical expressions and linkers to organize your ideas. Chronological linkers include: *at the beginning, then, further on, in addition, next, finally*. Linkers of cause and effect include: *so, for this reason, therefore, consequently, as a result*. For the conclusion, you can use typical phrases such as: *The author concludes that..., At the end of the article, the author outlines the main principles of..., The article ends with the author's conclusion about....*

A summary is usually written in the third person. You can use different references to the author, such as 'the author of the article,' 'he/she,' or the author's name. If you know the author's status or occupation, you can also refer to them to avoid repetition

— for example: ‘the *scientist*,’ ‘the *Microsoft designer*,’ ‘the *developer*,’ or ‘the *Nobel Prize winner*.’ You can also define the scientific or technical field to which the author belongs. Examples include: ‘*The author is a proponent of...*’ or ‘*Being a principled opponent of this trend, the author disagrees with...*’

You need to use reporting verbs to present the author’s ideas and views. Learn a wide range of verbs that can be used in your summary. For example: *The author states, suggests, tries to point out, argues, expresses his opinion, informs, assumes, adds, claims, emphasizes that...*

For a more formal style of writing, you can use a variety of reporting nouns and adjectives. Examples of reporting nouns include: *The author makes an introductory/contradictory/provocative statement about...; The author’s observation of... helps shed light on...; Through the comparison of..., the author comes to the conclusion that...; The explanation provided by the author is convincing.* Examples of reporting adjectives include: *The author is very critical of...; The author is uncertain about... etc.*

A summary should be between 7 and 10 sentences long. It should not be too detailed or overloaded with information. The purpose of a summary is to present only the author’s main ideas (not yours), supported by relevant details. Do not include your personal opinion or interpretation. A summary should remain impersonal and objective, as it focuses on someone else’s article or book.

C. Write a summary of the text you have read in task 9B, following the guidelines from the previous task. Your summary should be between 7 and 10 sentences long.

Unit 10

Cyber Culture in the Digital Age: Social and Technical Trends

Task 1 Lead-in

Read and discuss the introductory statements. Do you agree or disagree with them? Add any relevant information you may have about the facts presented. Provide your comments on each statement.

1. Today, the Internet has a profound impact on our lives. Films, books, the fashion industry, and social life have all become digitalized. This shift is natural for young people who were born in the digital age, but not for older generations who still remember street payphones.
2. The traditional lifestyle of the average person has been completely transformed by social networks, online communication, blogging, posting, and taking selfies. While this has made social life more interesting and exciting, it has not necessarily made people happier.
3. Cyberspace offers many benefits, but the negative influence of the Internet on people of all ages is often evident. People are becoming lazier and leading a more sedentary lifestyle; they engage in less physical activity, and any form of experience has become a challenge.
4. In the digital age, one of the most popular trends is taking selfies. People take selfies for different purposes: to share their photos with friends or for personal satisfaction. However, selfies don't reveal a person's true personality and often present an idealized image of the user. Therefore, we shouldn't judge someone solely by looking at their selfie.

Task 2 Reading

A. Read the texts and fill in the gaps using the words from the list below. Translate the keywords.

Selfie: types, characteristics, and challenges

Adjust, blemishes, captured, cautious, crop, drive, fuel, glitches, high, technical, tint.

The rise of selfies can be attributed to several factors. People have embraced the trend of posting selfies on various social networks, and it has become a widespread phenomenon. In search of a flattering, perfect, or casual image of themselves, people often put a great deal of effort into creating the ideal selfie and then share it publicly on the Internet. Naturally, they wait for likes and comments in response. However, psychologists suggest that a low level of real-life social interaction is a key factor behind this behavior. The lack of meaningful social connections may 1 _____ people to take more selfies. Various selfie-editing and sharing applications provide opportunities to take and post numerous selfies. The friends and followers with whom we share them are generally supportive. Likes, comments, and positive reactions 2 _____ the desire to take even more selfies.

There are different types of selfies: group and individual, business and travel, casual and street, as well as selfies taken with the help of a drone. All of them can be challenging to capture, as the ultimate goal is to capture a flattering image. The background often plays a decisive role in achieving this. Various visual issues and 3 _____ can affect the quality of a selfie. One common problem is the unsuccessful attempt to hide facial 4 _____ or imperfections, such as an unnatural skin tone. The entire photo may also appear too dark or have an unusual color 5 _____. A solution is to adjust the camera's optical settings according to the lighting conditions.

If your camera allows you to take 6 _____-resolution photos, you need to set the basic options correctly: 7 _____ the contrast, increase the number of pixels for higher resolution, and blur the background to better focus on the foreground subject. You can also 8 _____ the photo to remove any unwanted objects that were accidentally 9 _____. Sometimes, resizing the picture can make it appear sharper. Selfie equipment may also include a selfie stick, which remains one of the most popular holiday gifts.

Famous individuals may face public criticism for inappropriate selfies. Politicians, for example, can be caught on camera taking selfies, sometimes without realizing it. Since several such cases have appeared in the media, there is now a recognized need for guidelines regarding political selfies. Politicians represent their countries and nations, so they must be 10 _____ when taking selfies in public places. The image

should reflect the atmosphere of the event they are attending. For instance, taking humorous selfies at formal or memorial events is considered inappropriate.

B. Read the text and translate the keywords in bold.

Selfies: *The wrong focus*

Taken from: "The Telegraph", editorial article

There is something **dispiriting** about the rise of the "selfie". Not the thing itself: it is merely a self-portrait. Our **neophilic culture** acts as though it has invented for itself something that Albrecht Dürer was doing in AD 1484.

No, it's the **ubiquity**. Today we learn that the "selfie stick", a device for extending your reach to make these images easier to take, is to be one of the most popular Christmas presents. Each moment of each life must be accompanied by a **grinning image** of the one living it – "Here's me in Machu Picchu," "Here I am diving the Great Barrier Reef." "This is me having my wisdom teeth extracted."

But Machu Picchu is beautiful without James from Croydon's face in front of it. The Barrier Reef doesn't need you getting in the way. Maybe, soon, we'll realize we aren't the most important thing in the picture. [9]

Task 3 Vocabulary

Find the keywords in the text that match the definitions below.

1. A culture obsessed with everything new.
2. An image of a person smiling broadly.
3. A thing or trend that can be found everywhere.
4. A feeling associated with emotional decline and pessimism.
5. An image of a person trying to appear perfect to everyone.
6. To be accidentally photographed by a camera.
7. To change or modify a mechanism in response to external environmental factors.
8. A high-quality photo.

Task 4 True or False

Read the statements below and indicate whether they are true or false. If a statement is false, provide the correct information from the text.

1. The author of the second text is sanguine about taking selfies nowadays. There is nothing disturbing about the gradual rise in the popularity of selfies.
2. Albrecht Dürer painted his first self-portrait in 1484 BC.

3. Selfies and selfie accessories are extremely popular nowadays. A selfie stick, for example, is one of the most popular holiday gifts.
4. A typical selfie shows a serious face and a famous location in the background.
5. Selfie images posted on various social platforms are usually honest and objective, they always represent a real image of a person.
6. One of the most common reasons for taking and posting selfies is a lack of socialization and recognition.
7. Famous politicians can take selfies in various locations. However, they must remain cautious, as public exposure can still pose certain risks.

Task 5 Answer the questions

1. What is a selfie? Write your own definition in your own words.
2. Who is Albrecht Dürer, and what did he do in AD 1484?
3. Why are selfies so ubiquitous nowadays? How can people use the background when taking selfies? What effect do they pursue?
4. What are the main types of selfie images? (Use adjectives from the texts to identify the types.)
5. What motivates people to take flattering selfies? What could cause selfie addiction?
6. Why can political selfies be risky for a politician's personal and public image?
7. What is the difference between self-portraits and selfies?

Task 6 Video Watching

A. Before watching the video read the text and translate the keywords in bold.

The Challenge of Choosing a Tech Brand

Digital devices have become an integral part of our personal image. While some people look for gadgets at an **affordable** price, others focus on technical features and **sleek** design. A device can **speak volumes** about its owner. Some people prefer expensive devices as luxury items, while others choose useful gadgets that are currently in fashion. All aspects should be considered when choosing a device.

The main criteria concern not only price and quality but also technical characteristics, which can vary from device to device. People choose MacBooks for their **color accuracy**, high-quality **pre-press features**, and optimized **typography**. PC users appreciate faster processing speeds and graphics subsystems that are more suitable

for gaming. Anyone hesitant about choosing an operating system should know that Windows is more **customizable**, whereas macOS is generally considered less vulnerable to viruses and technical failures. Of course, price also matters: PCs are more affordable, while Macs are generally more expensive.

Some people support a particular tech brand and buy its devices to feel part of a tech community (for example, the Apple community). Many users appreciate a brand's technological vision and the public image of its founders.

B. Find the video on YouTube “5 Reasons why you should buy a Mac instead of a PC in 2022” // Created Tech.

<https://m.youtube.com/watch?v=HfMhFTGq0tM&pp=ygUvNSBSZWFzb25zIHdoeSB5b3Ugc2hvdWxkIGJleSBtYWwgW5zdGVhZCBvZiBwYyDSBwkJ2ACjtWo3m0M%3D>

Translate the keywords and watch the video.

Die-hard Apple fanboy, customization, raw power, to beat out the Macs, resale value, connectivity, ecosystem, technical features, to wirelessly transmit, to switch seamlessly between, insanely powerful, layout, trackpad, to increase customizability, to take pity on someone, warranty.

C. Answer the questions.

1. What benefits usually motivate users to choose a PC? What does the author say about the resale value of Macs and PCs?
2. How often does the presenter upgrade his MacBook? How long has he been using macOS and Windows?
3. What are the main benefits of macOS? Why is it considered more stable and reliable than Windows?
4. Why is the issue of maintenance and technical support so important? Why are Macs better in this regard? What happened to the presenter's device?
5. Why is it convenient for users to have both software and hardware from the same brand? What does the presenter say about having the same provider for both hardware and software?
6. What can you infer from the video about the presenter's technical preferences? Which device is better: a PC or a Mac?

Use of English

Task 7 The Passive voice

A. Rewrite the sentences using the words given in brackets.

1. There's no point in buying equipment because our director hasn't decided what kind of technology blog we should launch. *We can't purchase technical equipment until ... (decision).*
2. Scientists and technicians generally dislike excessive advertising in a video blog post. *Too much advertising in a video blog post will (frowned) ... by scientists and technicians.*
3. The latest video content isn't available yet because the administrator is still downloading it. *The new video post isn't available yet because it ... (downloaded).*
4. Our technical experts are conducting post-experimental analysis; we can't present the final results yet. *Due to ongoing post-experimental analysis, the final results ... (fully assessed).*
5. We have an additional task, so we have to reschedule the final presentation. *The final presentation ... (postponed) due to an additional task.*
6. Private security guards delivered illegal equipment, which included a hard drive with malicious software, to the cyber police. *A hard drive containing malware ... (handed) to the cyber police by private security guards.*
7. I was deeply disappointed because someone hacked my computer, took control of it, and spread malware. *I was deeply disappointed because my computer ... (taken) and infected by malware.*
8. We cannot be certain that all devices on the local network are free from malware. *A malware infection cannot ... (ruled).*

Task 8 Concession clauses

A. Choose the correct alternative to complete the sentences.

1. As much as / Whereas we appreciate your far-reaching project, we unfortunately can't attend the key presentation you have planned.
2. Despite / Although clickbait is ubiquitous on social networks, many people can avoid it and focus on other things.
3. Although / Despite having a reliable security system, responsible professionals prefer not to click on random links or ads at work.

4. In spite of / As much as it pains me to admit it, we cannot restore information that has been stored for two decades.
5. Despite the fact that that / Although we don't have free access to the online library store, we can easily monitor the new book editions on librarian social networks.
6. Although / Whereas the social media account hasn't improved the visibility of the company's website, we will launch an additional online catalog to inform clients about new devices.
7. I never run software without verifying it, although / even if it comes from a reliable source.
8. Difficult though it may be / However it may be difficult to recognize a deceptive link, our system can detect and block any suspicious content.
9. Each type of promotional video has its own pros and cons, but they can all be effective in increasing page views, whichever / whatever type you choose.
10. While / However you shouldn't rely solely on short-lived, flashy memes to promote your account, they can be helpful to attract the youngest users.

B. Rewrite the sentences using the words in brackets.

1. I made several costly attempts to recover video files from my social media account, but I failed. (*Despite...*) _____
2. Social networks provide commercial benefits, but spam filters prevent low-view advertisements from having any promotional impact. *Social networks offer numerous commercial benefits (however)* _____
3. Social networks are widely popular and connect people from all over the world, but an increasing number of users are choosing to quit using them. (*Despite the fact that*) _____
4. This device is old, but it remains reliable, as it was purchased from a reputable store with a long-term warranty. (*However*) _____
5. For teenagers, it is difficult to limit their time on social networks, but they need to make time for studying. (*Hard...*) _____
6. The task is quite sophisticated, but we must first consider the basic principles of logic. (*No matter...*) _____
7. Social networks can be addictive, but at the same time, many bloggers explain how to practice digital detox. (*While*) _____
8. No matter how often you require professional tech support, do not ignore it when updating software. (*whenever, no matter how many times*) _____

Key to exercises

Unit 1 Hackers and Cyber Threats

Task 3 Vocabulary

1 Alias, 2 susceptible to, 3 A wake-up call, 4 unappealing, 5 reflective on his crimes, 6 less substantive, 7 cripple the computer system, 8 wandering, 9 reliant on, 10 faceless protagonist, 11 bug bounty hacking, 12 mock crime, 13 security-savvy professional, 14 to tighten security.

Task 4 True or False

1 F he is reflective on his crimes committed in teenage years, 2 T, 3 F, 46% of companies, 4 F He is a pioneering doctor who reacted emotionally, 5 T, 6 T, 7 T, 8 T

Task 6 Key words and expressions

A. 1i; 2b, h; 3g; 4a; 5e; 6c; 7f; 8d, j

B. 1 worried, 2 faceless, 3 savvy, 4 harmful, 5 call, 6 breach, 7 appealing

Task 7 Video Watching

1 F He is a top professional bug bounty hacker, 2 T, 3 F Detecting bugs, 4 F It is outside the city, 5 T, 6 T, 7 F He says that he likes money, 8 F Buenos Aires, 40 times more, 9 F Santi's dream is to have his own company and do bug bounty hacking

Task 8 Verb Tenses

1 has always wanted, 2 finished, 3 studied, 4 was offered, 5 has been organizing, 6 has met, 7 have become, 8 were unable to find, 9 started, 10 received, 11 had established, 12 have been managing, 13 have visited, 14 presented, 15 had already told, 16 has become

Task 9 Word Formation

1 importance, 2 reliance on, 3 anonymity, 4 appreciation, 5 susceptibility, 6.maintenance

Task 10 Quantifiers and determiners

Part 1. 1 several 2 most of 3 little 4 few 5 several 6 neither 7 either

Part 2. 10 a lot of, 11 Every, 12 several, 13 many, 14 several, 15 most of the bugs, 16Everyone, 17 all

Unit 2 Career in Cyber sphere AI engineering

Task 3 Vocabulary

1 fast-changing industry, 2 lucrative career choice, 3 to be on top of the game, 4 up and coming professionals, 5 college tuition, 6 to advance in your career, 7 to be employable, 8 avenues, 9 a permanent position in, 10 dedicated professional

Task 4 True or False

1 T, 2 F low cost of education, 3 F sometimes it's enough to finish IT courses, 4 T, 5F IT specialists have many opportunities

Task 7 Idioms and expressions

Part 1. a- 3, b- 7, c- 1, d- 2, e- 5, f- 6, g- 4, h- 8. Part 2. a- 2, b- 8, c- 4, d- 7, e- 5, f- 1, g- 6, h- 3

Task 8 Idioms and expressions. Practice

Part1 1 - b, 2 - d, 3 - a, 4 - c; Part 2 1 - e, 2 - f, 3 - c, 4 - d, 5 - a, 6 - b; Part 3 1 - d, 2 - e, 3 - c, 4 - a, 5 - b; Part 4 1 - a, 2 - b

Task 9. Expressions related to work, job, profession

Part1: 1 - e, 2 - g, 3 - c, 4 - j, 5 - d, 6 - f, 7 - b, 8 - a, 9 - h, 10 - I Part 2: 1 - h, 2 - b, 3 - d, 4 - c, 5 - e, 6 - g, 7 - f, 8 - a

Task 10 Future forms

A. 1 will, 2 will, 3 will, 4 are you doing, 5 might, 6 is due to, 7 Are you seeing

B. a) we definitely won't get b) I will probably be able to get

C. 1 on the brink of, 2 on the verge of, 3 a thing, 4 marked by, 5 likely, 6 on the point of, 7 is due to, 8 likely, 9 determined, 10 a distant memory

Unit 3 Internet Security

Task 2 Key words and terms

1 internet security, 2 encryption, 3 intrusion, 4 fraud, 5 malicious software or malware, 6 sensitive information, 7 take over, 8 surreptitiously, 9 flawed authentication, 10 log into, 11 large-scale, 12 insecure

Task 5 True or False

1 F, it is an insecure channel for communication; 2 F, from-the-ground-up engineering is also a way of protection; 3 F, malware was created intentionally, 4 F, DoS attacks don't target user information; 5 F, they can replicate themselves; 6 F, they need carrier to penetrate into the system; 7 T; 8 F, it surreptitiously monitors the user's activity; 9 T; 10 F

Task 7 Verb Tenses

1 have been, 2 downloaded, 3 set up, 4 installed, 5 has felt, 6 is trying, 7 has achieved, 8 was designed, 9 equipped, 10 has had, 11 participated, 12 tried, 13 remembered, 14 recorded, 15 detected, 16 was blocked

Task 8 Formal and Informal email

A. 1 I was delighted to receive your proposal, 2 The choice of venue is especially fitting for, 3 I am pleased to accept your invitation and look forward to visiting London, 4 I would be most grateful, 5 My preference would be, 6 which provides an excellent opportunity to host a small gathering, 7 If possible, could you kindly

inquire, 8 I will inform you, 9 I would be interested to know, 10 Please inform me of, 11 I very much look forward to seeing

B. 1 Active forms prevail in the first informal email, passives are used more in the second informal email; 2 Noun constructions are used in the formal email to replace verbs and verbal constructions; 3 “So that” is less formal. It is used in the first email; “Consequently” is more formal. It is used in the second email; 4 The first email: Hope, it will be..., Can’t wait to...; 5 Acknowledging the email, accepting the invitation – paragraph 1, giving some information, details, suggestions – paragraph 2, providing additional information – paragraph 3.

Unit 4 Mobile Phone Technology

Task 3 Vocabulary

A. 1 a breakthrough internet device, 2 seamlessly, 3 off the charts, 4 synced to, 5 to dismiss, 6 a commonplace, 7 a carrier, 8 to tweak, 9 over-reaching, overpriced

B. 1 inertial scrolling, 2 multitasking, 3 pinch-to-zoom, 4 accelerometer, 5 proximity sensor, 6 ambient light sensor, 7 user-replaceable battery, 8 Radio frequency transparency

Task 5 True or False

1 T; 2 F, 2007, six months earlier; 3 F only three sensors, it didn’t have a fingerprint sensor and a front facing camera sensor; 4F, only two of them; 5 T; 6 F; 7 T; 8 T (the things were still being tweaked)

Task 7 Articles

Part 1. 1 an, 2 a, 3 a, 4 The, 5 The, 6 the, 7 a, 8 the, 9 zero article, 10 the

Part 2. 1 The, 2 a, 3 zero article, 4 a, 5 A, 6 A, 7 The, 8 the, 9 The, 10 an, 11 The, 12 a, 13the, 14 the, 15 an

Task 9

1 technology, 2 name, 3 deciphered, 4 indispensable, 5 transmitted, 6 a distress signal, 7 demand, 8 a thing

Unit 5 Drone Technology: Exploring Flight Mechanics

Task 3 Vocabulary

1 augmented reality, 2 hover solidly, 3 fly off smoothly, 4 buzzing, 5 rotors, 6 carbon fiber, plastic, 7 shield, 8 protective hull, 9 CES, unveiling, 10 unwary, 11 unit

Task 4 True or False

1 T; 2 F, the author describes them as marveled people; 3 F, it could be controlled on a distance; 4 T; 5 T; 6 T, 7 F, the drone has only two cameras installed; 8 T

Task 7 Relative Clauses

1a, 2c, 3b, 4e, 5d, 6g, 7h, 8f

Task 8 Safety Rules for Using Drones

1 who, 2 whose, 3 many of whom, 4 which, 5 where, 6 whose, 7 who, 8 which, 9. many of whom, 10 many of whom

Task 9 Adjectives in formal English

A. applicable standards, approachable person, preparatory work, managerial position, provocative question

B. formidable challenge, dismal failure, unrivaled skill, incomparable result, incomparable things, futile effort, indisputable champion

C. unproductive method, ineffective solution, unacceptable response, unpredictable result, inappropriate material, incompatible colors

D. post-work inspection, underrated talent, overvalued resource, prehistoric ages

Task 10

1 knowledgeable, 2 memorable, 3 harmful, 4 overqualified, 5 approachable, 6 provocative, 7 inconsistent

Unit 6 Cyberspace

Task 2

1 environment, 2 interconnected, 3 well-, 4 conventional, 5 meet, 6 encryption, 7 influential, 8 insatiable, 9 poses

Task 3 Vocabulary

1 commonplace, 2 constantly evolving, 3 ever-changing, 4 game changer, 5 to take off, 6 captivating, 7 immersive, 8 to adjust back, 9 to be fully mesmerized, 10 to fade, 11 side effect, 12 eye strain, 13 detrimental, 14 to exacerbate

Task 4 True or False?

1 F, people want to escape from ever-changing world 2 F, it has taken off after the pandemic, 3 F, it can be harmful, 4 T, 5 F, VR is captivating and immersive creating uncertainty about which world is real, 6 T, 7 F, He was fully mesmerized and immersed, 8 T

Task 7 Nouns

B. 1 growth, 2 development, 3 competition, 4 credibility, 5 ability, 6 achievements, 7 popularity

C. 1 attraction, 2 challenge, 3 goals, 4 development, 5 qualities, 6 demand, 7 ability

Task 8 Word formation

A. a) administration, interception, Cyber intrusion, network/broadband connection, data conversion, business/artificial intelligence; b) correlation, novelty, safety, security, complexity; c) simplicity, originality, usability, functionality, accessibility, availability

Task 9 Nouns in Formal English

A. 1. His refusal to participate in such a promising project came as a complete surprise. 2. Their unexpected *agreement* completely changed the course of the project for the better. 3. *Mr Atkinson's proposal* to reduce the price of the new model of mobile phone was approved. 4. My business partners avoided *participation* in the testing of new VR equipment due to security risks. 5. My *refusal* to use this email

service stems from delivery issues. 6. She expressed her *dislike* of street polling due to the low level of public engagement. 7. James expressed his *disapproval* of participating in the project without compensation. 8. They are aware of our *dissatisfaction* regarding the reduced number of awards.

B. 2. We have seen a reduction in the number of data breaches due to increased awareness among all users in our company. 3. Installing software without checking it first may carry a high risk. 4. There has been a clear decline in the production of large-volume engines over the past ten years due to environmental protection requirements. 5. The lack of free access to high-speed Internet for residents of remote regions significantly hinders the development of rural communities. 6. He proposed the idea of using an old telephone tower to distribute high-speed internet and successfully implemented it. 7. The difficulty of launching the Internet in a remote region did not stop us; we completed the project. 8. The trade-off between battery size and the device's compactness remains a top concern.

Unit 7 Surveillance in Cyberspace

Task 3 Vocabulary

1 a top priority, 2 attached to, 3 an intruder, 4 to deter, 5 vigilantly, 6 backing up the data, 7 reliance on, 8 to sneak into their blindspots, 9 to fail to accurately capture movement and track crimes, 10 suspicious occurrences, 11 a fallback network, 12 to alleviate the problem, 13 perpetrators

Task 4 True or False

1 T, 2 F valued data are vigilantly watched, 3 F, Data loss can be detrimental, the solution is to back up your data to the cloud; 4 F, there is some blindspots, 5 T, 6 F, the surveillance system operates on WiFi and the only one possible source of charging is solar power; 7 T

Task 7 Negative prefixes.

B. malfunctioning, 2 underrated, 3 disorganized, under-staffing 4 incompleteness

C. 1 predate, 2 pre-Internet, 3 irreplaceable, 4 pro-European, antisocial 5 post-industrial, 6 understatement, 7 overestimate, 8 maladministration, 9 nonexistent, 10 irrefutable, unconvinced

E. 1 understatement, 2 pre-digital, 3 immortalized, 4 post-classical, 5 insecure, 6 anti-hacking, 7 overexposed, 8 irreplaceable

Task 8 Video blog review on a technical topic

B. 1 specifically, 2 prevalence, 3 clearly, 4 light, 5 focusing, 6 main, 7 concluding, 8 preference, 9 Despite, 10 compelling

Unit 8 Money matters online

Task 2 Reading

B. 1 withdraw, 2 ubiquitous, 3 mortar, 4 programs, 5 features, 6 takeover, 7 identity, 8 enroll, 9 fraudulent, 10 hold

Task 3 Vocabulary

1 ubiquitous gadgets, pervasive, 2 brick-and-mortar banks, 3 pay bill program, 4 to withdraw cash, 5 electronic statements, 6 safety features, 7 automatic account lockouts, 8 account alerts, 9 bank fraud, 10 account takeover fraud, 11 identity theft, 12 enroll in, 13 fraudulent, 14 to put a temporary hold

Task 4 True or False

1 F, Brick-and-mortar banks are less functional than online banks; 2 T; 3 T; 4 F, E-statements show all expenses and charges; 5 T; 6 T; 7 F, It is online banking threat; 8 F, Online banking courses enrollment will definitely increase your awareness of the risks and ways to avoid them; 9 F, Fraudulent activity is a form of illegal action

Task 7 Technical issues

A. 1 failure, 2 it's acting up, 3 faulty, 4 life, 5 performance, 6 manufacturing, 7 performance, 8 obsolescence, 9 compatibility, 10 issue, 11 distortion

B. 1 It's acting up, 2 phone photo distortion, 3 technical performance, 4 development team, 5 technical issues, 6 manufacturing defect, 7 obsolescence

Task 8 Modifiers with adjectives

A. 1 justifiably, 2 pretty, 3 incredibly

B. 1 reasonably, 2 simply, very, 3 completely, slightly

C. 1 incredibly, 2 quite, 3 slightly, 4 completely, 5 absolutely, 6 quite, 7 absolutely

Task 9 Conditionals

B. 1c, 2a, 3e, 4b, 5d, 6f

C. 1 I wouldn't have missed your tech representative's surname on the list of participants at the conference; 2 we wouldn't have had power outages; 3 would have gained more followers; 4 If we had used a protective hull; 5 If the weather had been better; 6 we wouldn't have spent so much time on preparatory work.

D. 1e, 2a, 3d, 4b, 5c, 6f

E. 1c, 2a, 3b, 4d, 5e

Task 10 Writing. linking words

Part 1 1 so, 2 as soon as, 3 at the moment, 4 after, 5 since.

Part 2 1 finally, 2 despite, 3 eventually, 4 since then

Unit 9 The Internet Now and Then

(A Brief History of the Internet Development)

Task 2 Reading

1) indestructible, 2) nodes, 3) conceivable, 4) daring, 5) facing, 6) blistering, 7) rapidly, 8) resemblance, 9) capabilities

Task 3 Vocabulary

1 indestructible network, 2 conceivable network, 3 node, 4 daring solution, 5 found themselves facing criticism, 6 blistering pace, 7 rapidly, 8 to bear very little resemblance to, 9 technological capabilities

Task 7 Legendary facts of the Internet Development

1F 1968, 2 T, 3 F they discussed secretly, 4 F only the destination was important but the route was unimportant, 5 F because it was decentralized, 6 F it was located in Los Angeles, 7 T, 8 F sci-fi lovers used the Internet for ideas exchange, 9 F it was rapid growth, 10 T, 11 F It's difficult to predict the Future Internet

Task 8 Reported Speech

B. 1 told, promised, 2 the question of, 3 confident, 4 offer, 5 insulting, 6 warning, 7 promise, 8 apologetic, 9 explanation, 10 asked.

Unit 10 Cyber Culture in Digital Age

(Social and technical trends)

Task 2 Reading

1 drive, 2 fuel 3 technical glitches, 4 blemishes, 5 tint, 6 high, 7 adjust, 8 crop, 9 captured, 10 cautious

Task 3 Vocabulary

1 neophiliac culture, 2 a grinning image, 3 ubiquity, 4 dispiriting, 5 a flattering image, 6 to be captured 7 to adjust, 8 a high-resolution picture

Task 4 True or False

1 F, the author finds it dispiriting; 2 F, 1484 AD; 3 T; 4 F, it's rather grinning image; 5 F, they are flattering; 6 T; 7 T

Task 7 The Passive voice

1 the decision is made to launch the blog, 2 will be frowned upon by scientists and technicians, 3 it's still being downloaded, 4 have not been fully assessed yet, 5 has to be postponed due to an additional task, 6 was handed over to the cyber police by private security guards, 7 was taken over and infected by malware, 8 cannot be ruled out

Task 8. Concession clauses

A. 1 As much as, 2 Although, 3 Despite, 4 As much as, 5 Although, 6 Although, 7 even if, 8 Difficult though it may be, 9 whichever, 10 While

B.

1. Despite my efforts to recover the video files from my social media account, I was unsuccessful. 2. Social networks offer numerous commercial benefits; however, the promotion of low-view advertisements is often hindered by spam filters. 3. Despite the fact that social networks are widely popular and connect people from all parts of the world, an increasing number of individuals are choosing to stop using them. 4. However old it may be, this device remains reliable, as it was purchased from a reputable store and comes with a long-term warranty. 5. Hard as it may be, teenagers must limit their time on social networks in order to make sufficient time for studying. 6. No matter how sophisticated the task may be, we must first take the basic principles of logic into consideration. 7. While social networks can be addictive, many bloggers offer valuable advice on how to practice a digital detox. 8. Don't ignore professional tech support whenever you update your software, no matter how many times you need to do it.

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Каленченко Олександр Олександрович

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