MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

SIMON KUZNETS KHARKIV NATIONAL UNIVERSITY OF ECONOMICS

FOREIGN LANGUAGE OF ACADEMIC AND PROFESSIONAL COMMUNICATION

Guidelines
to practical tasks and independent work
of Bachelor's (first) degree students
of speciality 125 "Cyber Security"
of the educational program "Cyber Security"

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Educational materials and tasks are given to provide students with the necessary lexical material on the topic and stimulate the development of reading, writing and speaking skills in English in the field of information systems and technologies.

For Bachelor's (first) degree students of speciality 125 "Cyber Security" of the educational program "Cyber Security".

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Introduction

The guidelines on the academic discipline are organized in accordance with the tasks and conditions of learning foreign languages in higher educational institutions of a non-linguistic profile.

A set of exercises has been prepared to provide interdisciplinary connection and help students to develop their professional competences using English. The purpose of the guidelines is to deepen knowledge and improve students' speaking skills in English in the field of cyber security, information systems and technologies.

The guidelines are directed towards the improvement and expansion of students' active and passive vocabulary by mastering terminology with the help of additional lexical tasks, learning to reproduce dialogues and monologues, discussing topics and problems.

Tasks are designed on the basis of gradual assimilation of knowledge which will allow students to develop the ability to express their thoughts. Students will improve their professional English speaking skills based on questions for a variety of professional topics related to the subject of the academic discipline.

Students' knowledge, abilities and skills can be assessed while doing tasks, writing terminological dictations and discussing problems. The guidelines are prepared in accordance with the requirements of the educational process organization in higher educational institutions and are coordinated with the structure and content of the foreign language curriculum.

Unit 1
Innovation technologies.
Artificial intelligence

Task 1. Answer the questions.

1. What is artificial intelligence? How powerful is it in the modern world?

2. What are the advantages and disadvantages of using AI in different spheres of life?

3. What are the applications of AI in the world of the 21st century?

Task 2. These are the key terms to the text under study. Read them carefully and find the best explanation. Use a dictionary for help.

1. deploy	a) someone who has committed a crime or a violent or harmful act
2. parse data	b) an event, which is unusual and generally considered to be unacceptable
3. fraud detection	c) refers to self-driving vehicles or transport systems that move without the intervention of a human driver
4. discern fraudulent activity	d) to analyze and convert one string of data into a different format/type
5. deviant case	e) a malicious act that seeks to damage data, steal data, or disrupt digital life in general
6. malicious	f) to use something or someone, especially in an effective way
7. cyber threat	g) intended to cause damage to a computer system, or to steal private information from a computer system
8. perpetrator	h) taking action by causing change and not only reacting to change when it happens
9. autonomous driving	i) to see, recognize, or understand dishonest and illegal acts
10. deep learning	j) a process that imitates the way humans gain certain types of knowledge and is an important element of data science, which includes statistics and predictive modeling
11. proactive	k) identification of the crime of gaining money or financial benefits by a trick or by lying

Task 3. Read the text below. Match choices (A – H) with 1 – 5. There are three choices you do not need to use.

AI is not a futuristic vision, but rather something currently being integrated and deployed into a variety of sectors. There are numerous examples where AI already is making an impact on the world and augmenting human capabilities in significant ways.

1. _____

Investments in financial AI in the United States tripled due to decisions about loans made by software with the account taken of a variety of finely parsed data about a borrower, rather than just a credit score or a background check. A prominent example of this is taking place in stock exchanges, where high-frequency trading by machines has replaced much of human decision-making. People submit, buy and sell orders, and computers match them in the blink of an eye without human intervention. Machines can spot trading inefficiencies or market differentials on a very small scale and execute trades that make money according to investor instructions. Fraud detection represents another way, in which AI is helpful in financial systems. It sometimes is difficult to discern fraudulent activities in large organizations, but AI can identify abnormalities or deviant cases requiring additional investigation. That helps managers find problems early in the cycle, before they reach dangerous levels.

2. _____

AI affects the speed of warfare, the proliferation of zero day or zero second cyber threats will challenge even the most sophisticated signature-based cyber protection. This forces significant improvement to existing cyber defense methods. Increasingly, vulnerable systems are migrating, and will need to shift to a layered approach to cybersecurity with cloud-based, cognitive AI platforms. This approach moves the community toward a "thinking" defensive capability that can defend networks through constant training on known threats. This capability includes DNA-level analysis of currently unknown codes, with the possibility of recognizing and stopping inbound malicious code by recognizing a string component of the file. Therefore, preparing for hyperwar and defending critical cyber networks must become a high priority because China, Russia, North Korea, and other countries are putting substantial resources into AI.

3. _____

The city of Chicago has developed an AI-driven "Strategic Subject List" that analyzes people who have been arrested for their risk of becoming future

perpetrators. It ranks 400,000 people on a scale of 0 to 500, using items such as age, criminal activity, victimization, drug arrest records, and gang affiliation. In looking at the data, analysts found that youth is a strong predictor of violence, being a shooting victim is associated with becoming a future perpetrator, gang affiliation has little predictive value, and drug arrests are not significantly associated with future criminal activity. Judicial experts claim AI programs reduce human bias in law enforcement and lead to a fairer sentencing system. New technologies make it possible to match images and voices with other types of information, and to use AI on these combined data sets to improve law enforcement and national security. Through its "Sharp Eyes" program, Chinese law enforcement is matching video images, social media activity, online purchases, travel records, and personal identity into a "police cloud".

4. _____

In this area, AI and machine learning are producing major innovations. Over $80 billion was invested in autonomous vehicle technology between August 2014 and June 2017, including applications both for autonomous driving and the core technologies vital to that sector. Autonomous vehicles – cars, trucks, buses, and drone delivery systems – use advanced technological capabilities. Those features include automated vehicle guidance and braking, lane-changing systems, the use of cameras and sensors for collision avoidance, the use of AI to analyze information in real time, and the use of high-performance computing and deep learning systems to adapt to new circumstances through detailed maps.

5. _____

Metropolitan governments are using AI to improve urban service delivery. The Cincinnati Fire Department, for instance, is using data analytics to optimize medical emergency responses. The new analytics system recommends to the dispatcher an appropriate response to a medical emergency call as for a patient to be treated on-site or taken to hospital based on several factors, such as the type of call, location, weather, and similar calls. The city officials are deploying this technology to prioritize responses and determine the best ways to handle emergencies. They see AI as a way to deal with large volumes of data and figure out efficient ways of responding to public requests. Rather than address service issues in an ad

hoc manner, authorities are trying to be proactive in how they provide urban services.

A National security
B Healthcare
C Investment consulting
D Criminal justice
E Smart cities
F Finance
G Travel
H Transportation

Task 4. Match the verbs with noun phrases to make word partnerships.

1) to augment;	a) trading inefficiencies;
2) to parse;	b) critical cyber networks;
3) to spot;	c) human capabilities;
4) to detect;	d) abnormalities;
5) to discern;	e) medical emergency responses;
6) to identify;	f) fraud;
7) to shift;	g) data;
8) to defend;	h) law enforcement;
9) to improve;	i) fraudulent activities;
10) to optimize.	j) to a layered approach.

Task 5. Read the text below. For gaps (1 – 10) choose the correct word (A, B, C or D).

The categories used to define AI offer a way to consider various ways to apply AI. Some of the systems used to (1) ____ AI by type are arbitrary and not distinct. For example, some groups view AI as either strong (generalized intelligence that can (2) ____ to a variety of situations) or weak (specific intelligence designed to perform a particular task well). The problem with strong AI is that it doesn't perform any task well, while weak AI is too specific to perform tasks independently. Even so, just two type classifications won't do the job even in a general sense. The four classification types promoted by Arend Hintze form a better basis for understanding AI [5]:

1) Reactive machines: The machines you see (3) ___ humans at chess or playing on game shows are examples of reactive machines. A reactive

machine has no (4) ___ or experience upon which to base a decision. Instead, it relies on pure (5) ___ power and smart algorithms to recreate every decision every time.

2) Limited memory: A (6) ___ car or autonomous robot can't afford the time to make every decision from scratch. These machines rely on a small amount of memory to provide (7) ___ knowledge of various situations. When the machine sees the same situation, it can rely on experience to reduce (8)___ time and to provide more resources for making new decisions that haven't yet been made. This is an example of the current level of strong AI.

3) Theory of mind: A machine that can assess both its required goals and the potential goals of other entities in the same environment has a kind of understanding that is feasible to some extent today, but not in any commercial form. However, for self-driving cars to become truly (9) ___, this level of AI must be fully developed. A self-driving car would not only need to know that it must go from one point to another, but also (10) ___ the potentially conflicting goals of drivers around it and react accordingly.

4) Self-awareness: This is the sort of AI that you see in movies. However, it requires technologies that aren't even remotely possible now because such a machine would have a (11) ___ of both self and consciousness. In addition, instead of merely intuiting the goals of others based on the environment and other entity reactions, this type of machine would be able to (12) ___ the intent of others based on experiential knowledge.

1	A detect	B classify	C recognize	D distribute
2	A adopt	B adapt	C use	D deploy
3	A destroying	B depleting	C defending	D beating
4	A retention	B memory	C remembrance	D commemoration
5	A calculation	B working	C computational	D managing
6	A autonomic	B self-securing	C self-driving	D self-aware
7	A experiential	B skilled	C classified	D parsed
8	A optimized	B fraudulent	C reaction	D proaction
9	A autonomous	B self-reliant	C solitary	D monoject
10	A foretell	B realize	C imagine	D intuit
11	A notion	B sensitivity	C feeling	D sense
12	A substantiate	B infer	C conclude	D supervise

Task 6. Read the text again and tell if the sentences are true (T) or false (F).

1. Sometimes, it is difficult to determine the type of AI used.
2. Arend Hintze distinguishes artificial intelligence systems into five main types.
3. A proactive machine is designed with no experience in decision-making, thus, it relies on decision-making algorithms.
4. Autonomous robots with strong AI rely on small amounts of memory to evaluate every situation.
5. Self-driving machines must have the capacity to assess driver's goals in order to define conflicting ones.
6. Self-aware artificial intelligence machines are frequently used in producing films.
7. Self-aware machines guess what the others aim in a situation regardless of any experiential knowledge they have.

Unit 2
Innovation technologies in everyday life. Mobile telephones

Task 1. Answer the questions.

1. Which spheres of life are influenced by innovation technologies most of all?
2. How will the development of robotics, artificial intelligence (AI), or the management of big data affect modern companies?
3. What are the recent developments in mobile technologies and how do they affect everyday life?
4. Do you frequently use your smartphone and what are the main purposes of using it?

Task 2. Read the text about mobile devices and threats they present to data security. Fill in the gaps with the words below [4].

Unencrypted data, apps, security, spyware, theft, malicious, protect, affected sites.

Mobile (1) _____ threats are commonly thought of as a single, all-encompassing threat. But the truth is, there are four different types of mobile

security threats that organizations need to take steps to (2) _____ themselves from:

1) Mobile Application Security Threats. Application-based threats happen when people download (3) _____ that look legitimate but actually skim data from their device. Examples are (4) _____ and malware that steal personal and business information without people realizing it is happening.

2) Web-Based Mobile Security Threats. Web-based threats are subtle and tend to go unnoticed. They happen when people visit (5) _____ that seem fine on the front-end but, in reality, automatically download (6) _____ content onto devices.

3) Mobile Network Security Threats. Network-based threats are especially common and risky because cybercriminals can steal (7) _____ while people use public WiFi networks.

4) Mobile Device Security Threats. Physical threats to mobile devices most commonly refer to the loss or (8) _____ of a device. Because hackers have direct access to the hardware where private data is stored, this threat is especially dangerous to enterprises.

Task 3. These are the key terms to the text under study. Read them carefully and find the best explanation. Use a dictionary for help.

1. malware	a) a computer system or program that automatically prevents an unauthorized person from gaining access to a computer when it is connected to a network such as the internet
2. infiltrate	b) any system for security and fraud prevention which automatically breaks up and reorders information before it is sent via telephone lines or the Internet
3. POS system	c) enter a place / organization / network secretly in order to spy on it or influence it
4. sensitive data	d) careful watching of someone, especially by an organization such as the police or the army
5. firewall	e) a system that allows a business to accept payments from customers and keep track of sales; it is used to refer to the cash register at a store
6. encryption	f) knowledge of potential dangers that allows you to prevent or mitigate those attacks
7. threat intelligence	g) unauthorized transmission of data from within an organization to an external destination or recipient

8. surveillance	h) a type of computer program that is designed to damage or disrupt a computer
9. hijack a device	i) ability to be easily physically, emotionally, or mentally hurt, influenced, or attacked
10. security breach	j) something such as a document that proves who someone is, what organization they represent, or what their qualifications are
11. data leakage	k) a person who makes an illegal attempt to harm someone's computer system or the information on it, using the internet
12. credentials	l) confidential information that must be kept safe and out of reach from all outsiders unless they have permission to access
13. cyber attacker	m) take control of computer systems, software programs and/or network communications
14. vulnerability	n) any incident that results in unauthorized access to computer data, applications, networks or devices
15. vendor	o) an individual or company, also known as a supplier, that sells goods or services to someone else in the economic production chain

Task 4. Read the text below. Choose one sentence from (A – H) to fill in each gap (1 – 6) in the text. There are two choices you do not need to use [9].

Mobile phones are a critical part of our daily business lives, even non-company phones are used for work and company mobiles are certainly, frequently, used. Infected applications and malware are increasingly targeted at mobile devices and can arrive at a user's device by the simple downloading of an application. (1) _____

Using mobiles for daily tasks or as POS systems is hazardous. Smartphones are used daily in the workplace to open emails, store and access sensitive data, make calls, and are even used as point-of-sale (POS) devices to receive customer payments. (2) _____

SecurityMetrics writes that a mobile device, to be used for taking customer payments, costs less than a POS device. And, that: "A company can save even more by implementing a BYOD policy". The crossover between personal and business mobile use and the increasing use of mobile phones in the workplace, however, creates additional cybersecurity risk for companies. (3) _____ And, the security measures a company has put in

place for their desktops and overall networks often aren't expanded for mobile devices leaving them without firewalls, encryption, or antivirus software.

Mobile malware attacks are increasing. Check Point, as per ZDNet reporting, warned this summer of a 50 % increase in mobile malware attacks this year compared to the last. (4) _____ Check Point believes one reason may be the increasing use of mobile banking, its director of threat intelligence and research, Maya Horowitz, says: "The sharp rise in mobile banking malware correlates to the growing use of mobile banking applications". It's worth noting here that from a business perspective, a mobile banking application is often a perfectly reasonable install for employees.

Mobile security breaches can lead to data theft, surveillance, and the hijacking of devices. Mobile malware can steal data, conduct surveillance, and even perform malicious advertising. It can also hide undetected on devices for some time. (5) _____ It has also been discovered pre-installed on over 20,000 cheap smartphones, according to ZDNet. Horowitz advises: "Users need to protect their devices with a holistic solution that blocks malware and network attacks, and prevents data leakage and credentials theft, without affecting the user experience".

Antivirus applications might not be as safe as we think. Perhaps even more concerning, a Forbes report in August revealed that antivirus applications for mobile devices that had seen 28 million downloads themselves opened the door for cyber attackers. Research by Comparitech found that such applications presented attack paths and opportunities for cybercriminals, often via security flaws and vulnerabilities. Comparitech tested 21 Android antivirus applications and 47 % failed in some way, its researcher Aaron Phillips said: "(6) _____ The results were eye-opening".

The largest risk to businesses from breached mobile devices is that sensitive company, or even customer data, could be directly exposed to cyber attackers and used fraudulently or in further attacks.

A These cyber attacks are particularly focused on Android operating systems.

B This malware can then infiltrate corporate networks or steal data, and this poses a significant cyber risk for businesses.

C The reason is smartphones and tablets are less secure than computers as standard.

D We looked for flaws in the way each vendor handles privacy, security, and advertising.

E Cybersecurity strategies must cover mobile devices and policies be put in place for safe mobile and tablet use.

F Though businesses and users need to take their own actions to minimise risk, some responsibility lies with application stores where these "bad" applications can be found.

G Tablets are used in the same way, as we work towards digital transformation and the reduction of paperwork in our offices and environment.

H One common form of malware, accounting for 30 % of attacks, called Triada, can allow attackers to take control of a device.

Task 5. Read the text again and find synonyms for the words below.

1) penetrate, intrude;
2) aimed at;
3) risky; dangerous;
4) execute, put into effect;
5) comprehensive, complete;
6) encoding;
7) knowledge;
8) danger;
9) observation, monitoring;
10) violation.

Task 6. Match words and phrases to make word partnerships used in the text.

1) infected	a) devices
2) sensitive	b) risk
3) point-of-sale	c) flaws
4) cybersecurity	d) applications
5) antivirus	e) leakage
6) security	f) software
7) threat	g) data
8) malicious	h) advertising
9) data	i) theft
10) credentials	j) intelligence

Task 7. Read the text below. For gaps (1 – 12) choose the correct word (A, B, C or D).

Insider threats

Mobile devices can also facilitate threats (1) ____ employees and other insiders. Humans are the (2) ____ link in any security strategy, and many employees have neither the knowledge, nor the time (3) ____ whether or not their devices have updated security software installed. The downloading of applications can also lead (4) ____ unintentional threats. Most people download applications from app stores and use mobile applications that can access enterprise assets without (5) ____ idea of who developed the application, how good it is, or whether there is a threat vector through the application right back to the corporate network. The misuse of personal cloud services through mobile applications is another issue; when (6) ____ to convey enterprise data, (7) ____ applications can lead to data leaks that the organization remains entirely unaware (8) ____. Not all insider threats are inadvertent; malicious insiders can use a smartphone to misuse or misappropriate data by (9) ____ large amounts of corporate information to the device's secure digital (SD) flash memory card, or by using the device to transmit data via email services to external accounts, circumventing even robust monitoring technologies such (10) ____ data loss prevention (DLP).

Mobile security threats will continue to advance as corporate data (11) ____ by a seemingly endless pool of devices, and hackers try to cash in on the trend. Making sure users fully understand the implications of faulty mobile security practices and getting them to adhere to best practices can be difficult. Many device users remain unaware of threats, and the devices themselves tend to lack basic tools that are (12) ____ available for other platforms, such as anti-virus, anti-spam, and endpoint firewalls.

1	A from	B of	C with	D about
2	A weaker	B weakest	C weakly	D weakness
3	A to track	B track	C tracked	D tracking
4	A up	B ahead	C to	D for
5	A many	B any	C a	D no
6	A uses	B use	C are used	D used
7	A their	B that	C this	D these
8	A of	B about	C to	D with
9	A being downloaded	B downloading	C downloaded	D downloads
10	A like	B with	C as	D or
11	A is accessed	B accessed	C access	C had been accessed
12	A readier	B ready	C readiness	C readily

Unit 3
Innovative processes in business with the application of advanced technologies. Innovations. Modern core technologies

Task 1. Answer the questions.

1. What scientific and technological innovations propelled the industrial revolution? Can you think of any innovations that brought dramatic changes to the world?

2. What is, in your opinion, the difference between creativity and innovation?

3. Which areas of everyday life demand innovations nowadays?

4. What are the potential problems connected with the implementation of innovations?

Task 2. These are the key terms to the text under study. Read them carefully and find the best explanation. Use a dictionary for help.

1) facilitate	a) a set of mathematical instructions or rules that, especially if given to a computer, will help to calculate an answer to a problem
2) plugged into	b) an electronic device, that emits the light in order to sense some object of the surroundings
3) algorithm	c) to help deal with a process or find a solution without getting directly involved in the process, discussion
4) neural network	d) the process by which a mobile robot autonomously modifies its own trajectory during navigation in order not to collide
5) infrared sensor	e) the process of computing the effective method of transportation or transfers through several stops
6) ultrasound sensor	f) an instrument that detects the position or motion of objects and which uses laser radiation rather than microwaves
7) vehicle	g) connected to a piece of electrical equipment or to the main electricity supply
8) lidar	h) an electronic device that measures the distance of a target object by emitting sound waves, and converts the reflected sound into an electrical signal

9) obstacle avoidance	i) a machine such as a car, bus, or truck which has an engine and is used to carry people from place to place
10) route planning	j) a computer system or a type of computer program that is designed to copy the way in which the human brain operates

Task 3. Read the text below. For questions (1 – 6) choose the correct answer (A, B, C or D) [12].

What are autonomous robots? This might not be the big question on everyone's mind, in between taking the kids to school and writing that report before tomorrow, but it is an important one to ask, as the development of these machines hums quietly along in parallel with our everyday lives. From robot helpers in our workplaces to autonomous vacuum cleaners in our homes, we are entering a new era of robot-human cohabitation, where little machines facilitate our lives in unprecedented ways.

Nowadays, basically every machine that helps people can be considered a robot. From the ATM on your street corner to the shiny coffee machine in your kitchen, automation is already a major part of the everyday. Concepts similar to robots have been around since the 4th century BC in Greece, but the first official "robots" were the industrial robots introduced in the early 20th century. They were pioneers in replacing the jobs that were too dangerous/repetitive for humans to do, working tirelessly where humans couldn't. Then came the mobile robots, around the middle of the 20th century, which could move in the air, in water, and on the ground. Today, we are seeing the rise of a more advanced kind of bot: the autonomous robot.

By definition, all robots are at least semi-autonomous, in that they will react to specific events and conditions without needing to be directed in real time. An autonomous robot, however, is one that acts and behaves with a higher degree of independence. It can accomplish complex objectives on its own, without humans or wires (i.e. it does not need to be permanently plugged into an electrical source). It can also maintain itself, such as charging itself when necessary – as demonstrated by, for example, the Roomba vacuum cleaner. These robots are essentially a set of data (predetermined information) and behavioral rules, whose algorithms and environmental sensors allow them to do the job they have been programmed to do "autonomously", and stay out of danger and trouble. This predefined

information can be, say, a map of the environment, or a neural network of images that has already 'learned' to recognize people, animal, cars, etc.

Autonomous robots are generally mobile and can, therefore, move around on their own. Like all other mobile robots, autonomous robots come in many different forms – from flying drones, to ground-based robots, to water-based and even underwater machines. At the moment, they are often limited to a given environment – such as a factory space, shopping mall, railway station, or a warehouse. However, as the technology becomes more advanced, they will be put to use in a wider array of environments, from labs and research centers, to our streets (like our future ground-based robots) and the home. The possibilities seem (nearly) endless.

The robot's workplace is often challenging, frequently requiring work in areas that are too dangerous or difficult for humans to reach, and can contain chaotic and unforeseen variables. The exact type, orientation and location of the robot's next object of work, for example, can all vary unpredictably (at least from the robot's point of view). The robot must be able to deal with these changes and apply different solutions, although they occasionally need a little help from a human minder.

When it comes to sensors, as with software, different robots use different types. Simpler forms of autonomous robot, for example autonomous vacuum cleaners, rely on infrared or ultrasound sensors to navigate and "see" their environment. Higher-level robots, like autonomous vehicles, tend to use cameras, radars (radio sensors) or lidars (laser sensors) that give them the ability to constantly identify and categorize the things they "see". These sensors are essential for gathering the necessary data, along with that the robot may receive from other data sources such as maps, to allow it to constantly assess its environments and make real-time "decisions". The more advanced robots need this decision-making ability in order to execute three principal tasks: obstacle avoidance, localization and mapping, and route planning.

As robots' environments often contain chaotic and unforeseen variables (see above), some robot developers are looking into ways to make robots 'self-learning', allowing them to acquire new methods of accomplishing their tasks or adapting to their changing surroundings. These "self-learning" robots are sometimes called adaptive or intelligent robots; they use machine learning or deep-learning, both subsets of artificial intelligence (AI), to

automatically learn and improve from experience. One example of this is Aibo, the AI Japanese robot pet.

1. The text tells about _____:

a) the treats related to the introduction of autonomous devices in business;

b) how robots function;

c) ways robots can be adjusted to life situations;

d) the history of technology development.

2. What is NOT true according to the text:

a) we are surrounded by robots in our everyday life;

b) the first robot was designed in the 4th century BC;

c) robots can charge themselves when necessary;

d) robots can perform functions predetermined by the designers?

3. Robots:

a) are at least partially independent from humans;

b) require constant power supply;

c) with similar functions and specification may be applied in any sphere of life;

d) are crucial for gathering large amounts of data.

4. Where are robots usually used:

a) in situations where they have to adapt to changes;

b) in offices to streamline business processes;

c) in places and situations threatening human's life or health;

d) in radars and lidars?

5. How do robots gather data from the environment:

a) they use a variety of sensors depending on the type of device.

b) they have decision-making ability to avoid obstacles.

c) they use maps uploaded at the stage of design.

d) they need help from their operators.

6. What are intelligent robots:

a) they are able to adapt to ever changing surroundings by constant datamining.

b) they perform numerous functions in limited environments.

c) they are able to analyze chaotic and unforeseen variables.

d) they are able to automatically learn through the analysis of their past actions.

Task 4. Read the text again. Tell if the sentences below are true (T) or false (F).

1. Robots assist humans in many spheres of life making it easier.
2. Big complex autonomous devices can only be called robots.
3. The first robots were designed to assist in building houses and railroads in the mid 20th century.
4. Modern autonomous robots are later modifications of the first robots, which have a certain degree of mobility.
5. At present, the use of robots is not limited to only one type of natural environment.
6. Roomba vacuum cleaners can plug themselves into electrical sockets if their battery is low.
7. The type of robots determines the kind of sensors they use to capture information.
8. The information robots gather from their surroundings facilitates their decision-making.
9. The ability of all robots to foresee all the variables will enable to make them self-learning devices.
10. Deep learning enables adaptive robots to automatically learn and improve from real-life situations.

Task 5. Read the text again and find synonyms in the text for the words below.

1) buzz;
2) make easier;
3) take place of;
4) fulfill;
5) storehouse;
6) demanding;

7) unpredicted;
8) plot a route/course;
9) barrier;
10) obtain.

Task 6. Read the text below. For gaps (1 – 12) choose the correct word (A, B, C or D).

Public WiFi networks are generally less (1) ____ than (2) ____ networks because there's no way to know who set the network up, how (or if) it's secured with (3) ____, or who is currently accessing it or monitoring it. And as more companies (4) ____ remote work options, the public WiFi networks your employees use to access your servers (e.g., from coffee shops or cafes) could (5) ____ a risk to your organization.

For example, cybercriminals often (6) ____ WiFi networks that look authentic but are actually a front to (7) ____ data that passes through their system (a "man in the middle" attack).

If this seems far-fetched, it isn't. Creating (8) ____ WiFi hotspots in public spaces with network names that look completely legit is incredibly simple, and people are very willing to (9) ____, as shown by experiments run at the Democratic and Republican conventions in 2016 and by an experiment (10) _____ by a researcher in 2019 from Magic.

The best way for you to protect your organization against (11) _____ over public WiFi networks is by requiring employees to use a VPN to access company systems or files. This will ensure that their (12) _____ stays private and secure, even if they use a public network to access your systems.

1	A secure	B saved	C protective	D preserved
2	A personal	B customary	C private	D personnel
3	A encryption	B encasing	C decoding	D embodying
4	A try	B offer	C accept	D attempt
5	A file	B take	C present	D make
6	A make up	B found	C set up	D build up
7	A grab	B catch	C rob	D capture
8	A fake	B fraudulent	C false	D fancy
9	A join	B connect	C combine	D encompass
10	A fulfilled	B carried	C made	D run
11	A warnings	B notices	C threats	D remarks
12	A session	B visit	C attendance	D presence

Unit 4
Innovative processes in business with the application of advanced technologies. Information technologies

Task 1. Answer the questions.

1. What fosters innovation in the IT sphere?

2. Why is it important for companies to innovate and invest in modern technologies?

3. What are the things that cannot be controlled in the process of innovation implementation?

Task 2. These are the key terms to the text under study. Read them carefully and find the best explanation. Use a dictionary for help.

1) influx	a) to stop very suddenly, especially before it was meant to
2) response time	b) digital solutions that help teams collaborate and perform more productively; apps that act as virtual, online meeting rooms for team members, enabling remote team collaboration
3) transformative	c) the full complement of genetic material of human beings
4) communication tools	d) the arrival or entry of many people or things
5) far-fetched	e) a way of achieving an aim or solving a problem by trying a number of different methods and learning from the mistakes that you make
6) come to a grinding halt	f) causing a major change to something or someone, especially in a way that makes it or them better
7) dexterity	g) the process where an electronic device such as a scanner is used for creating a digital representation of an image
8) trial and error process	h) the time taken for a computer to do something after you have given an instruction
9) image capture	i) improbable in nature; unlikely; barely believable based on logical or normal thinking
10) human genome	j) the ability to perform a difficult action quickly and skillfully with the hands or to think quickly and effectively or do something difficult extremely well; cleverness

Task 3. Read the text below. Match choices (A – H) to (1 – 5). There are three choices you do not have to use [6].

What are the hottest technological innovations at the moment? As it turns out, some will be pretty obvious, while others might surprise you. In the following article, we've collated some of the most interesting and potentially revolutionary tech-innovations currently either being researched or developed.

1. _____

AI has been on the receiving end of massive financial investment over the last few years. According to Forbes, 80 % of enterprises are now investing in it or are planning to expand AI investment if they already are. This influx of money has given rise to some serious innovation in deep learning. With all this cash flowing around, many tech experts believe AI will really "come of age" within the next few years.

2. _____

The appetite for faster and faster internet connection is really pushing the technology forward. Businesses and private users are constantly demanding ever quicker response times and the industry is responding. With lightning-fast internet speeds just around the corner, it should be transformative for many aspects of our lives. Should it be achieved, it will increase the efficiency of workers and will provide reliable communication tools for companies that rely on remote workers. This is where 5G might be able to change the world as much as our "regular" internet did several decades ago. That is if it doesn't kill us all first, of course.

3. _____

More and more of our lives are becoming integrated with smart tech. Our homes are no exception. Demand for ever better smart home appliances and home entertainment systems are changing the way we socialize. Whether for better or worse, today is just the tip of the iceberg. Current trends seem to indicate a greater demand for more control over the way we are entertained in the home from tech. One area that may be something to watch is something called flexible viewing surfaces. These promise to be able to curve around any environment and will change home entertainment and advertising beyond all recognition.

4. _____

Computers and robots are dumb. Very dumb indeed. If their work environment changes even slightly outside their preprogrammed procedure

and the whole production line could come to a grinding halt. This is where improving robotic dexterity offers an incredible opportunity for more flexible automation. While it may be possible to program robots to figure out how to grasp something by "looking" at it in the future, current research is trying to make them learn how to do so through a trial and error process. One example is a project called Dactyl, that has taught itself to flip a toy using it's "fingers".

5. _____

Small, swallowable devices are currently being developed that can capture images of your guts without the need for anesthetic. They can even be used for infants and children. Once fully developed, these little medical devices will revolutionize how medical professionals diagnose and monitor some very serious diseases. This will be an incredibly powerful tool for things like cancer and intestinal disorders like environmental enteric dysfunction. Thanks to scientific developments like the Human Genome Project, personalized medicines and vaccines could be just around the corner. One interesting application for this is the possibility of developing personalized cancer vaccines. This might sound a little far-fetched, but it is hoped that medical professionals could soon train your immune system to identify and destroy cancer cells. This, if achieved, could make cancer a thing of the past.

This technology:

A provides the world with animal-free meat;
B predicts the creation of very smart autonomous devices;
C is being invested in heavily, which fosters its rapid development;
D will enhance machine learning;
E will enrich our lives and change the place we live;
F revolutionize the process of curing diseases;
G works at a very data transmission speed;
H presupposes the development of a brain-computer interface.

Task 4. Read the text again. Find nouns to complete the phrases from the text.

1. Technological _____
2. Massive financial _____
3. Deep _____
4. Internet _____

5. Response _____
6. Communication _____
7. Smart home _____
8. Flexible viewing _____
9. Preprogrammed _____
10. To capture _____

Task 5. Match words and phrases to make word partnerships used in the text.

1) technological	a) internet speeds
2) expand	b) process
3) influx of	c) investment
4) push	d) around
5) lightning-fast	e) money
6) curve	f) procedure
7) robotic	g) innovations
8) trial and error	h) halt
9) preprogrammed	i) dexterity
10) grinding	j) forward

Task 6. Read the text below. For gaps (1 – 12) choose the correct word (A, B, C or D) [11].

In order to carry out truly (1) _____ action, robotic systems must be equipped with (2) _____ components, information-processing capabilities, and some form of actuation.

Most autonomous robots are equipped with some form of (3) _____ sensing so the machine can "see" the (4) _____ environment. An entire suite of photonics (5) _____ is used to enable next-generation robotics systems to (6) _____ critical information such as distance and orientation which acts as a crucial (7) _____ for subsequent decision-making and action. For example, the Mars Curiosity Rover is equipped with (8) _____ integrated Mastcams used to capture full-color footage of the surrounding environment with a panoramic (9) _____.

The computational aspect of autonomous robots is usually based around (10) _____ learning and artificial intelligence, using advanced algorithmic analysis to parse out data and make decisions in real-time. Such an (11) _____ system can read visual data to determine the distance

between the robot and an obstacle and to subsequently adjust course to navigate around it.

Although the sensory input and computational (12) _____ collect and process data, motors are typically actuated to carry out the desired function. For example UVD robots are used to automate critical disinfection runs in clinical settings, using AMRs equipped with ultraviolet torches to sterilize surfaces. This requires careful motion tracking and compact, high-performance servos capable of actuating movement with optimal power efficiency to ensure operations can run uninterrupted for extended periods.

1	A autonomous	B self-dependent	C self-conscious	D private
2	A touch	B sensory	C feeling	D sense
3	A optical	B viewing	C visible	D regarding
4	A roundabout	B neighborhood	C closed	D surrounding
5	A decisions	B programs	C solutions	D packages
6	A receive	B impress	C perceive	D retrieve
7	A intake	B input	C income	D instinct
8	A single	B diversified	C manifold	D multiple
9	A view	B sight	C site	D look
10	A equipment	B device	C machinery	D machine
11	A embodied	B introduced	C set	D embedded
12	A diversification	B diversity	C array	D variety

Unit 5
Innovative technologies and globalization. Foreign trade

Task 1. Answer the questions.

1. How is innovation used as a tool by entrepreneurs?

2. Why can innovation be so difficult in the modern business world?

3. Why are companies struggling to innovate effectively? Think about the possible reasons and factors that can help successful implementation of innovative technologies.

4. What are the biggest mistakes many organizations make when it comes to innovation?

Task 2. These are the key terms to the text under study. Read them carefully and find the best explanation. Use a dictionary for help.

1) intertwine	a) to gradually weaken or destroy someone or something; to make someone less confident, less powerful, or less likely to succeed, or to make something weaker, often gradually
2) data flow	b) someone who helps and supports someone else
3) internet of things	c) software designed by criminals to prevent computer users from getting access to their own computer system or files unless they pay money
4) formjacking	d) the transfer of information (sometimes also material) from one part of the system to another
5) undermine	e) published specifications that establish a common language, and contain a technical specification or other precise criteria and are designed to be used consistently, as a rule, guidelines, or definitions
6) ransomware	f) a network of objects that are fitted with microchips and connected to the internet, enabling them to interact with each other and to be controlled remotely
7) digital trade	g) to improve the quality, amount, or strength of something
8) security standards	h) injecting malicious JavaScript code so that cybercriminals could hack a website and take over the functionality of the site's form page to collect sensitive user information
9) interoperability	i) an international organization that encourages and regulates trade between its member states
10) ally	j) to twist or be twisted together, or to be connected so as to be difficult to separate
11) enhance	k) varying from one another or from a norm; deviating; different
12) divergent	l) the sale of consumer products on the Internet, the supply of online services and data flows that enable global value chains, as well as services that enable smart manufacturing and other platforms and applications
13) WTO	m) the ability of a system or component to function effectively with other systems or components

Task 3. Read the text below. Choose one sentence from (A – H) to fill in each gap (1 – 6) in the text. There are two choices you do not need to use.

Trade and cybersecurity are increasingly intertwined. The expansion of the internet globally and use of data flows globally by businesses and

consumers for communication, e-commerce, and as a source of access to information and innovation, is transforming international trade. (1) _____

As global interconnectivity grows, however, so does exposure to the risks and costs of cyberattacks. For instance, formjacking – using JavaScript to steal credit card details from e-commerce sites – or supply chains hacks, which exploit third party services and software to compromise a final target, undermine business and consumer trust in using the internet for commerce. (2) _____ What is clear is that a lack of cybersecurity is costly and can undermine the trust of consumers and business in engaging in digital trade. Protecting trust in a digitally connected world necessarily involves collaboration across borders between the public and private sectors. Why? (3) _____

Due to the importance of cybersecurity, the leading countries are forced to adopt cybersecurity policies. According to one estimate at least 50 countries have adopted cybersecurity policies and regulation.

(4) _____ The EU identified the necessity of closer cooperation at the global level aimed at the improvement of security standards and information as well as promotion of a common global approach to network and information security issues. The most recent U.S. Cybersecurity Strategy reaffirms the need to strengthen the capacity and interoperability of those allies and partners to improve our ability to optimize our combined skills, resources, capabilities, and perspectives against shared threats.

A common approach can enhance cybersecurity and protect digital trade. (5) _____ These can include unique standards, requirements for localization of data or technology supply. (6) _____ A recent Brookings roundtable among cybersecurity and trade experts from government, civil society, and the private sector identified a need to unpack broad or restrictive measures from reasonable practices and policies designed to enhance the security of network infrastructure.

A Furthermore, overreaching national security protections may violate obligations under the WTO and free trade agreements.

B Global networks, organizations, and supply chains obviously rely on the same systems and software, most of it supplied by enterprises, and they face the same threats.

C Moreover, the spread of artificial intelligence, the "internet of things," and cloud computing will further work to increase global connectivity of businesses, governments, and supply chains.

D Yet, where governments seek to rely on the national security exception instead, the risk is this could lead to a large increase in trade restrictions.

E Another example is the WannaCry ransomware attributed to North Korea, which infected more than 200,000 computers across 153 countries, costing hundreds of millions of dollars damage.

F Conversely, divergent or obstructive approaches risk to create barriers to digital trade.

G Yet, in these cases, the government would be subject to the more rigorous (compared to the national security exception) disciplines of these other provisions.

H Some of these recognize a need for international cooperation.

Task 4. Match the verbs in column A with the appropriate words in column B to make collocations. Read the text again and check your answers.

A	B
1 to transform	a combined skills, resources, capabilities
2 to steal	b the same threats
3 to exploit	c the capacity and interoperability
4 to undermine	d third party services
5 to engage	e international trade
6 to optimize	f the necessity
7 to adopt	g business and consumer trust
8 to identify	h obligations under free trade agreements
9 to strengthen	i credit card details
10 to enhance	j in digital trade
11 to violate	k cybersecurity
12 to face	l cybersecurity policies

Task 5. Read the text and find synonyms in the text for the words below.

1) interlace;
2) growth, increase in size;
3) benefit from;
4) different;
5) increase;

6) combine, join;
7) break, disturb;
8) danger;
9) distribution;
10) limitations.

Task 6. Read the text below. For gaps (1 – 12) choose the correct word (A, B, C or D).

Developing countries

There are roughly 140 countries which (1) … to the Third World and which are (2) … as developing, less developed and poor countries. Although there are great (3) … between them, they do not have a number of (4) … in common. For (5) … much of the Third World is in poverty. A few exceptions to this rule are Saudi Arabia, Kuwait and Libya. However, because the economies of these three countries (6) … largely on one export, oil, they are still vulnerable in the world market. Most of the developing countries (7) … have very little industry. Farming is often the only (8) … in which the country can make money. (9) … worse, many of the countries only produce enough food to (10) … their own populations alive. India is a classic example of this, as (11) … less than 70 percent of its 870 million people work the land (12) … a living. Another feature which links less developed countries is life expectancy. People die younger in the Third World because of the poverty in which they live. The poor have much less healthy diets than in developed countries, and health care is also more likely to be inadequate.

1	A include	B attach	C connect	D belong
2	A said	B known	C told	D taken
3	A changes	B disagreements	C differences	D varieties
4	A features	B sides	C faces	D signs
5	A case	B instance	C reason	D fact
6	A decide	B insist	C lean	D depend
7	A then	B although	C while	D still
8	A way	B type	C model	D method
9	A Most	B More	C Quite	D Even
10	A have	B keep	C hold	D make
11	A a	B the	C no	D too
12	A as	B for	C of	D to

Unit 6
Innovative technologies and globalization. The art of business communication

Task 1. Answer the questions.

1. What are the benefits of a culture that encourages creativity and innovation?

2. Who in the organization should manage innovation? What skills and qualifications must these people have?

3. Who are the best people to be innovators? What personal qualities are essential for a successful innovator?

4. How can organizations encourage innovation?

Task 2. These are the key terms to the text under study. Read them carefully and find the best explanation. Use a dictionary for help.

1) to refine	a)
2) C-suite	b)
3) to add value	c)
4) to align with	d)
5) propel through	e)
6) craft a message	f)
7) a rant	g)
8) to deliver a pitch	h)
9) feedback	i)
10) in-tune leader	j)

Task 3. Read the text below. Match choices (A – H) with 1 – 5. There are two choices you do not need to use [10].

As organizations prepare for the remainder of 2021, cybersecurity leaders can use this opportunity to review their communication style and improve how they share key messages across the organization. Taking time to refine business communication can help those in security and technical leadership roles heighten the effectiveness of their messaging and ensure alignment with organizational priorities. At a time when we're limited in how we can interact, choosing the right medium and shaping the right message are key to delivering on security's function: to enable and protect value

creation. Communicating upward to the C-suite and the board, for example, is about demonstrating how cybersecurity adds value to the business. As such, security teams should redouble their efforts to align the mission and value of their department with shared business goals.

1. _____

How cybersecurity leaders craft their messages can either help propel the organization through the winds of change or leave it stranded in the middle of an ocean. Crafting an effective message can be challenging in the best of circumstances, but answering some important questions can help you deliver a persuasive pitch. What is the goal of the message? Why am I reaching out? Spending a few minutes to review one's purpose in sending a message can help make the difference between a rant and a directive, a complaint and a warning. What does success look like? Asking this simple question can help identify elements that may be missing from an important message, such as the intended result of this exchange or how you will measure whether the goal behind the message was achieved down the road.

2. _____

Without a solid core, there can be no venturing out, even into the bluest ocean. If the message is the sail that propels the organization forward, the MAST is there to help translate and support that propulsive force into a forward motion for the organization. Here's a breakdown of the acronym.

3. _____

Cybersecurity leaders can benefit greatly from considering whether they are choosing the right means for communicating their message and whether they are adapting the message to that medium well. Too many important messages are ignored because they are delivered as a poorly crafted or poorly narrated set of slides. In some cases, a series of messages delivered through more than one medium might need to be coordinated to achieve the desired effect. For example, a point raised in an introductory email might be followed by a more detailed plan-of-action report and brought home by a digestible presentation.

4. _____

The best leaders acknowledge the importance of having associates and supporters throughout the organization. While you may have crafted the perfect message over a great medium, your communication might not land if you don't have the support of key supporters. Who can you turn to ahead of time for feedback on this message? Try to seek out technical peers and

organizational influencers whose interests are aligned with yours and who understand your target audience.

5. _____

While the medium influences the message, the meeting environment in which the message is delivered can also have a strong effect on how it is perceived. Is your message set to be delivered in person, in a meeting, over the phone, over email, during an interactive one-on-one session or in a large meeting?

6. _____

As the saying goes, strike while the iron is hot. The timing of when your message is delivered can make or break your request. The most in-tune leaders ask themselves when is the best time to deliver their messaging. Some ideas may not be well received after some bad financial news or a reorganization announcement, while other ideas may be key to securing people and assets during times of transition.

A Space
B There's no sailing without a mast
C Allies
D Personnel
E Set Your Sails and Aims
F Time
G Medium
H Funding

Task 4. Match words and phrases to make word partnerships used in the text.

1) refine	a) report
2) heighten	b) pitch
3) ensure	c) request
4) align	d) the effectiveness
5) a persuasive	e) transition
6) a solid	f) business communication
7) plan-of-action	g) the mission
8) to seek out	h) technical peers
9) make or break	i) alignment
10) times of	j) core

Task 5. Find the words in the text that correspond to the following definitions.

1. The state of being protected against the criminal or unauthorized use of electronic data, or the measures taken to achieve this.

2. The facts or conditions of being regarded or treated as more important.

3. Information about reactions to a product, a person's performance of a task, etc. which is used as a basis for improvement.

4. Drive, push, or cause to move in a particular direction, typically forward.

5. Place or arrange (things) in a straight line.

Task 6. Read the text below. For gaps (1 – 12) choose the correct word (A, B, C or D).

The Campaign Against Killer Robots' (1) _____ new short film "Slaughterbots" predicts a new age (2) _____ warfare and automated assassinations, (3) _____ weapons that decide for themselves who to kill (4) _____. The organization hopes to pressure the UN (5) _____ lethal robots under the Convention on Certain Conventional Weapons (CCW), which has previously banned antipersonnel landmines, cluster munitions and blinding lasers on the battlefield.

Some have suggested (6) _____ the new film is scaremongering. But the technologies needed to build such autonomous weapons – intelligent targeting algorithms, geo-location, facial recognition – are (7) _____ with us. Many existing lethal drone systems only operate in a semi-autonomous mode because (8) _____ legal constraints and could do much more if allowed. It won't take (9) _____ to develop the technology so it has the capabilities shown in the film.

Perhaps the best way to see the film is less a realistic portrayal of how this technology will be used without a ban and more a wake-up call about how it (10) _____ change conflicts. For some time to come, small arms and light weapons will remain the major instruments of political violence. But the film highlights how the intelligent targeting systems supposedly designed to minimize causalities could be used for a selective cull of an entire city. It's easy to imagine how this might be put to use in a sectarian or ethnic conflict.

No international ban on inhumane weapons is absolutely watertight. The cluster munitions treaty has not prevented Russia (11) _____ using

them in Syria, or Saudi Arabia bombing Yemeni civilians with old British stock. But the landmine treaty has halved the estimated number of casualties – and even some of those states that earlier (12) _____ the ban, such as the US, now act as if they have. A ban on killer robots could have a similar effect.

1	A terrified	B terrific	C terrifying	D terrifies
2	A to	B of	C in	D from
3	A if	B unless	C until	D as
4	A do not ban	B are not banning	C are not banned	D ban
5	A outlawed	B to outlaw	C outlawing	D outlaws
6	A what	B those	C that	D which
7	A never	B recently	C yet	D already
8	A for	B in	C -	D of
9	A much	B many	C more	D less
10	A needs	B ought	C could	D has
11	A of	B from	C on	D off
12	A have not been ratified	B would not ratify	C have not ratified	D had not ratified

Key

Unit 1

Task 2. 1. F; 2. D; 3. K; 4. I; 5. B; 6. G; 7. E; 8. A; 9. C; 10. J; 11. H.

Task 3. 1. F; 2. A; 3. D; 4. H; 5. E.

Task 4. 1. c; 2. g; 3. a; 4. f; 5. i; 6. d; 7. j; 8. b; 9. h; 10. e.

Task 5. 1. b; 2. b; 3. d; 4. b; 5. c; 6. c; 7. a; 8. c; 9. a; 10. d; 11. d; 12. b.

Task 6. 1. T; 2. F; 3. F; 4. T; 5. T; 6. F; 7. F.

Unit 2

Task 2. 1. security; 2. protect; 3. apps; 4. spyware; 5. affected sites; 6. malicious; 7. unencrypted data; 8. theft.

Task 3. 1. h; 2. c; 3. e; 4. l; 5. a; 6. f; 7. d; 8. d; 9. m; 10. n; 11. g; 12. j; 13. k; 14. i; 15. o.

Task 4. 1. B; 2. G; 3. C; 4. A; 5. H; 6. D.

Task 5. 1. infiltrate; 2. directed at; 3. hazardous; 4. implement; 5. overall; 6. encryption; 7. intelligence; 8. threat; 9. surveillance; 10. Breach.

Task 6. 1. d; 2. g; 3. a; 4. b; 5. f; 6. c; 7. j; 8. h; 9. e; 10. i.

Unit 3

Task 2. 1. c; 2. g; 3. a; 4. j; 5. b; 6. h; 7. i; 8. f; 9. d; 10. e.

Task 3. 1. b; 2. b; 3. a; 4. c; 5. a; 6. d.

Task 4. 1. T; 2. F; 3. F; 4. T; 5. T; 6. F; 7. T; 8. T; 9. F; 10. T.

Task 5. 1. hum; 2. facilitate; 3. replace; 4. accomplish; 5. warehouse; 6. challenging; 7. dunforeseen; 8. navigate; 9. obstacle; 10. acquire.

Task 6. 1. a; 2. b; 3. a; 4. c; 5. b; 6. d; 7. d; 8. a; 9. b; 10. c; 11. a; 12. d.

Unit 4

Task 2. 1. d; 2. h; 3. f; 4. b; 5. i; 6. a; 7. j; 8. e; 9. g; 10. c.

Task 3. 1. C; 2. G; 3. E; 4. B; 5. F.

Task 4. 1. innovations; 2. investment; 3. learning; 4. connection; 5. times; 6. tools; 7. appliances; 8. surfaces; 9. procedure; 10. images.

Task 5. 1. g; 2. c; 3. e; 4. j; 5. a; 6. d; 7. i; 8. b; 9. f; 10. h.

Task 6. 1. a; 2. b; 3. a; 4. d; 5. c; 6. c; 7. b; 8. d; 9. a; 10. d; 11. d; 12. c.

Unit 5

Task 2. 1. j; 2. d; 3. f; 4. h; 5. a; 6. c; 7. l; 8. e; 9. m; 10. b; 11. g; 12. k; 13. i.

Task 3. 1. C; 2. E; 3. B; 4. H; 5. F; 6. A.

Task 4. 1. e; 2. i; 3. d; 4. g; 5. j; 6. a; 7. l; 8. f; 9. c; 10. k; 11. h; 12. b.

Task 5. 1. intertwine; 2. expansion; 3. exploit; 4. divergent; 5. enhance; 6. ally; 7. violate; 8. threat; 9. spread; 10. restrictions.

Task 6. 1. d; 2. b; 3. c; 4. a; 5. b; 6. d; 7. d; 8. a; 9. d; 10. b; 11. c; 12. b.

Unit 6

Task 3. 1. E; 2. B; 3. G; 4. C; 5. A; 6. F.

Task 4. 1. f; 2. d; 3. i; 4. g; 5. b; 6. j; 7. a; 8. h; 9. c; 10. e.

Task 5. 1. cybersecurity; 2. priorities; 3. feedback; 4. propel; 5. align.

Task 6. 1. c; 2. b; 3. b; 4. c; 5. b; 6. c; 7. d; 8. d; 9. a; 10. c; 11. b; 12. c.

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Contents

НАВЧАЛЬНЕ ВИДАННЯ

ІНОЗЕМНА МОВА АКАДЕМІЧНОЇ ТА ПРОФЕСІЙНОЇ КОМУНІКАЦІЇ

Методичні рекомендації до практичних завдань та самостійної роботи

студентів спеціальності 125 "Кібербезпека" освітньої програми "Кібербезпека" першого (бакалаврського) рівня

(укр. та англ. мовами)

Самостійне електронне текстове мережеве видання

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