Додаток А

**Зразок екзаменаційного завдання**

СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ

ЗАТВЕРДЖУЮ

Голова приймальної комісії

\_\_\_\_\_\_\_\_\_\_\_\_\_

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**ЕКЗАМЕНАЦІЙНЕ ЗАВДАННЯ**

**фахового вступного випробування**

**при прийомі на навчання за ОКР «спеціаліст» та ступенем «магістр»**

**з дисципліни «Іноземна мова» (англійська)**

**SECTION 1: READING**

**TASK 1**

**Read the text. Decide if the statements *(1–6)* are true or false. Mark the statements as *T (True)* or *F (False)*.**

***1*** \_\_\_\_\_ Researchers at the Brown Institute for Brain Science are investigating how movement is controlled by thinking.

***2*** \_\_\_\_\_ BrainGate works by reading brain signals and sending the information to a computer chip, which changes the signals into movement.

***3*** \_\_\_\_\_ A person with BrainGate can use the robotic arm to make coffee and a sandwich.

***4*** \_\_\_\_\_ When the technology is available for use, it is likely to cost around $1,000 per person.

***5*** \_\_\_\_\_ There is now also a wireless version of BrainGate.

***6*** \_\_\_\_\_ Donoghue says it will be possible to make the perfect soldier using this technology.

**MIND CONTROL**

 Imagine looking at something and being able to move it just by using your brain! That is exactly what the new technology called BrainGate can do – with the help of a robotic arm, anyway.

 BrainGate is the idea of Professor John Donoghue and his team of researchers at the Brown Institute for Brain Science, in Providence, Rhode Island, USA, who investigate how humans change thoughts in the brain into movements. BrainGate is attached directly to the brain. First of all, gold wires are put into the part of the brain that controls movement. These are then connected to a small computer chip which is just a few millimetres in size. When the person thinks about different movements, this creates electrical signals, which are picked up by the chip. After this, the signals that are created by the brain are sent back to a computer, which changes the signals into movements. Finally, the computer uses the robotic arm to carry out these movements. BrainGate can already be used to write an e-mail, operate the TV remote control or even play computer games, just by brain power.

 The technology is still in the early stages of development but it has already cost millions of dollars to develop and when it is available for use, it will probably cost thousands of dollars per person. There are still many challenges ahead for Donoghue and his team. They are currently planning a mini wireless version of the device, which will allow people to be connected to the computer at all times. Donoghue also dreams of using this technology to help disabled people who can’t move their arms and legs. He plans to connect the brain device directly to their own paralysed limbs. This will mean that the person can control their own body again, without relying on a robotic arm. In the near future, he would like to see disabled people feed themselves again and maybe even stand up using BrainGate.

 Clearly, this research could change the lives of disabled people but they are not the only ones who are interested in it. The military think it could be very useful, too. It is easy to understand why scientists might be worried about how thought-controlled machines could be used by the military.

**TASK 2**

**Read the text. Choose the most suitable heading from the list *(A – G)* for each part of the text *(7 – 12)*. There is one extra question which you do not need to use.**

1. Global English and the English language native speakers.
2. Typical violations of standard English grammar in international communication.
3. The role of territorial variants of the English language.
4. A new international attitude to the English language.
5. Native and non-native speakers of English in communication.
6. English is the language of international business.
7. Different aims of communication and the problem of correctness.

**Whose Language?**

 ***7*** \_\_\_\_\_ How many people can speak English? Some experts estimate that 1.5 billion people – around one-quarter of the world’s population – can communicate reasonably well in English. Never in recorded history has a language been as widely spoken as English is today. The reason why millions are learning it is simple: it is the language of international business and therefore the key to prosperity. It is not just that multinational companies such as Microsoft, Google, and Vodafone conduct their business in English; it is the language in which the Chinese speak to Brazilians and Germans to Indonesians.

 ***8*** \_\_\_\_\_ David Graddol, the author of *English Next*, says it is tempting to view the story of English simply as a triumph for its native speakers in North America, Britain and Ireland, and Australasia – but that would be a mistake. Global English has entered a more complex phase, changing in ways that the English-speaking countries cannot control and might not like.

 ***9*** \_\_\_\_\_ An important question one might ask is: whose English will it be in the future? Non-native speakers now outnumber native English speakers by three to one. The majority of encounters in English today take place between non-native speakers. According to David Graddol, many business meetings held in English appear to run more smoothly when there are no native English speakers present. This is because native speakers are often poor at ensuring that they are understood in international discussions. They tend to think they need to avoid longer Latin-based words, but in fact comprehension problems are more often caused by their use of colloquial English, especially idioms, metaphors, and phrasal verbs. On one occasion, at an international student conference in Amsterdam, conducted in English, the only British representative was asked to be ‘less English’ so that the others could understand her.

 ***10*** \_\_\_\_\_ Professor Barbara Seidlhofer, Professor of English and Applied Linguistics at the University of Vienna, records and transcribes spoken English interactions between speakers of the language around the world. She says her team has noticed that non-native speakers are varying standard English grammar in several ways. Even the most competent speakers sometimes omit the ‘s’ in the third person singular. Many omit definite and indefinite articles where they are required in standard English, or put them in where standard English does not use them. Nouns that are not plural in native-speaker English are used as plurals by non-native speakers (e.g. ‘informations’, ‘knowledges’, ‘advices’). Other variations include ‘make a discussion’, ‘discuss about something’ or ‘phone to somebody’.

 ***11*** \_\_\_\_\_ Many native English speakers will insist that these are not variations, they are mistakes. ‘Knowledges’ and ‘phone to somebody’ are simply wrong. Many non-native speakers who teach English around the world would agree. But language changes, and so do notions of grammatical correctness. Those who insist on standard English grammar remain in a powerful position. Academics who want their work published in international journals have to adhere to the grammatical rules followed by native English-speaking elites. But spoken English is another matter. Why should non-native speakers bother with what native speakers regard as correct? Their main aim, after all, is to be understood by one another, and in most cases there is no native speaker present.

 ***12*** \_\_\_\_\_ Professor Seidlhofer says, ‘I think that what we are looking at is the emergence of a new international attitude, the recognition and awareness that in many international contexts non-native speakers do not need to speak like native speakers, to compare themselves to them, and thus always feel ‘less good.’

**TASK 3**

**Read the text. For questions *13 – 18*, choose the best answer *(A, B, C,* or *D)*.**

**The robots are coming - or are they?**

Artificial Intelligence, or Al, is different from most technologies in that scientists still understand very little about how intelligence works. Physicists have a good understanding of Newtonian mechanics and the quantum theory of atoms and molecules, whereas the basic laws of intelligence remain a mystery. But a sizeable number of mathematicians and computer scientists, who are specialists in the area, are optimistic about the possibilities.

Over the years, various problems have impeded all efforts to create robots. To attack these difficulties, researchers tried to use the 'top-down approach', using a computer in an attempt to program all the essential rules onto a single disc. By inserting this into a machine, it would then become self-aware and attain human-like intelligence. In the 1950s and 1960s great progress was made, but the shortcomings of these prototype robots soon became clear. They were huge and took hours to navigate across a room. Meanwhile, a fruit fly, with a brain containing only a fraction of the computing power, can effortlessly navigate in three dimensions. Our brains, like the fruit fly's, unconsciously recognise what we see by performing countless calculations. This unconscious awareness of patterns is exactly what computers are missing. The second problem is robots' lack of common sense.

Because of the limitations of the top-down approach to Artificial Intelligence, attempts have been made to use a 'bottom-up' approach instead - that is, to try to imitate evolution and the way a baby learns. There appeared an idea of tiny 'insectoid' robots that learned to walk by bumping into things instead of computing mathematically the precise position of their feet. Today insectoid robots are on Mars gathering data for NASA. For all their successes in mimicking the behaviour of insects, however, robots using neural networks have performed miserably when their programmers have tried to duplicate in them the behaviour of higher organisms such as mammals.

There are people who believe that eventually there will be a combination between the top- down and bottom-up, which may provide the key to Artificial Intelligence. The computer expert Hans Moravec thinks that in the future robots will be programmed with emotions as emotions are vital in decision-making. There is no universal consensus as to whether machines can be conscious, or even, in human terms, what consciousness means. Robots might eventually attain a 'silicon consciousness’. They, in fact, might one day embody an architecture for thinking and processing information that is different from ours - but also indistinguishable. If that happens, the question of whether they really 'understand' becomes largely irrelevant. A robot that has perfect mastery of syntax, for all practical purposes, understands what is being said.

***13***. How is Artificial Intelligence different from most technologies?

1. in understanding Newtonian mechanics
2. in the absence of clear understanding of intelligence functioning
3. in mathematical calculations
4. in a better understanding of the quantum theory of atom

***14***. Not all scientists believe that AI will eventually be developed but …

1. most technologists do.
2. a great number of computer scientists do.
3. all physicists do.
4. all biologists do.

***15***. The way leading scientists to creating robots …

1. has not been started yet.
2. was not impeded by anything.
3. had a number of obstacles on it.
4. was clear and triumphant.

***16***. What insect proved the superiority of natural intelligence over artificial intelligence?

1. a bee
2. a dragon fly
3. a fruit fly
4. a spider

***17***. The insectoid robots were successful in …

1. mimicking the behaviour of insects.
2. duplicating the behaviour of mammals.
3. thinking and processing information.
4. imitating human emotions.

***18***. A robot might be hoped to understand human speech if …

1. he has a perfect mastery of syntax.
2. he has human-like emotions.
3. he has human-like common sense.
4. he becomes self-aware.

**TASK 4**

**Read the text. Seven sentences have been removed from it. Choose from the sentences *(A – H)* the one which best fits each gap *(19 – 25)*. There is one extra sentence that you do not need to use.**

1. In those days, mobiles were heavy, bulky things.
2. With cellular phones, a geographical area such as the UK is divided into irregular zones called cells.
3. For her it was an irreversible move, since her ignorance of that language meant she couldn’t work out how to re-select English.
4. Even more frightening, they encourage them to compose their own ring melodies.
5. Only one party could speak at a time, handing over by pushing a little switch.
6. The beauty of this system is threefold.
7. But the batteries were massive.
8. Lastly, because the signals coming from each phone don’t carry far, the same frequencies can be used over and over again across the country, opening the door to millions of users.

**Mobile phones**

 The first primitive mobile phones were introduced in the US in 1946. Users had to search manually for an unused channel before placing a call, then ask an operator to dial their call over the normal telephone network. ***19*** \_\_\_\_\_ Automatic channel-searching arrived in 1964, and these second-generation mobiles allowed two-way conversation for the first time. ***20*** \_\_\_\_\_ Besides, the system, which worked only around large cities anyway, had too few radio frequencies at its disposal to cope with thousands of subscribers. In 1976, New York City had just 545 customers, with 3,700 people on the waiting list.

But the introduction of the cellular system made mobiles for everyone a possibility. ***21*** \_\_\_\_\_ These cells may be 80 kilometres across, or less than one kilometre in busy areas. And at the centre of each cell is a radio transmitter/receiver, known as a base station. ***22*** \_\_\_\_\_ First, because each phone broadcasts only the short distance to its nearest base station, it doesn’t have to be very powerful or run off massive batteries. Then, if you wander into another cell, your call is automatically passed to the next base station. ***23*** \_\_\_\_\_

Japan had a system in place by 1979, but it took Britain and the US another four years to introduce cell phones. ***24*** \_\_\_\_\_ Now, the latest models fit in the palm of the hand and have a vast range of features and functions, but they weigh less than their instruction manuals.

 Today the simplest models already offer more services than the average user needs or understands. Some phones tempt users to play games. ***25*** \_\_\_\_\_ Instead of looking out of the window, passengers on trains can now pass the time by navigating between menus, programming hot keys and customising their own welcome text.

**SECTION 2: USE OF ENGLISH**

**TASK 5**

**Read the text. Choose the answer *(A, B, C,* or *D)* which best fits each space *(26 – 40)*.**

**А water crisis**

The Sahara’s meagre resources are being plundered ***26*** \_\_\_\_\_ the present day. This is shown most clearly in the dramatic fall in the region’s precious water reserves. The rock is of a type which hinders easy underground storage ***27*** \_\_\_\_\_ the water supply depends on rainfall. This being so, it is easy to understand why it varies. ***28*** \_\_\_\_\_, the ***29*** \_\_\_\_\_ of the situation goes far ***30*** \_\_\_\_\_ mere seasonal changes.

There is one district where observations go ***31*** \_\_\_\_\_ at least 125 years. Here it is known that wells of the balance beam type were once used in cultivated areas. This way of drawing water is intended for the ***32*** \_\_\_\_\_ of gardens and small plots and works only if there is water not more ***33*** \_\_\_\_\_ about five metres ***34*** \_\_\_\_\_ the surface. Today, though, not one well of this type exists. They have all been replaced by wells from ***35*** \_\_\_\_\_ the water has to be raised by draught animals, ***36*** \_\_\_\_\_ it is now 25 metres down. Here, then, the water level has evidently dropped by 20 metres in little over a century.

In a classic example of a vicious circle, ***37*** \_\_\_\_\_ of water has led to the digging of more wells to save the flocks and birds. As these have been deepened the water supply has been further depleted. This has resulted in soil erosion which then dries out the land still further.

The Aїr region was once regarded as the Switzerland of Africa because of its temperate climate. It was criss-crossed by valleys filled with palm trees and was thronged with wildlife. Nowadays, though, there are only a third of the palms which existed there at the turn of the century. The amount of wildlife has shown a ***38*** \_\_\_\_\_ fall. So, too, has the number of human beings who can now survive in the area. This is highly ***39*** \_\_\_\_\_ in a world where the overall ***40*** \_\_\_\_\_ is growing rapidly. We cannot afford to lose fertile land.

1. ***A*** up to ***B*** from ***С*** right to ***D*** since
2. ***A*** such ***B*** so ***С*** as ***D*** then
3. ***A*** although ***B*** even so ***С*** however ***D*** therefore
4. ***A*** seriousness ***B*** seriously ***С*** serious ***D*** seriosity
5. ***A*** forward ***B*** above ***С*** over ***D*** beyond
6. ***A*** forth ***B*** back ***С*** far ***D*** to
7. ***A*** irrigated ***B*** irrigate ***С*** irrigation ***D*** irrigating
8. ***A*** that ***B*** than ***С*** from ***D*** of
9. ***A*** over ***B*** above ***С*** between ***D*** below
10. ***A*** that ***B*** which ***С*** what ***D*** whose
11. ***A*** because of ***B*** thus ***С*** because ***D*** instead
12. ***A*** shorten ***B*** shortage ***С*** shortness ***D*** shortly
13. ***A*** proportion ***B*** portion ***С*** proportionate ***D*** proportionately
14. ***A*** dangerous ***B*** danger ***С*** dangerously ***D*** endanged
15. ***A*** populace ***B*** population ***С*** populate ***D*** popular

**TASK 6**

**For questions *41 – 50*, choose the answer *(A, B, C,* or *D)* which best fits each gap.**

1. The ancient Romans \_\_\_\_ central heating.

***A*** believe to invent ***B*** will believed to invent ***C*** are believed to invent ***D*** are believed to have invented

1. ‘Is Alana coming this evening?’ ‘No, she \_\_\_\_ at home with the kids.’

***A*** staying ***B*** stays ***C*** is staying ***D*** has been staying

1. We missed part of the concert because it \_\_\_\_ when we got to the hall.

***A*** started ***B*** had started ***C*** hadn’t started ***D*** has started

1. That house \_\_\_\_ for more than two years. I wish somebody would buy it!

***A*** is for sale ***B*** was for sale ***C*** has been for sale ***D*** was being for sale

1. I can’t see you tomorrow afternoon. I \_\_\_\_ a check-up at the dentist’s.

***A*** ’ll have ***B*** ’m having ***C*** have ***D*** am going to have

1. This \_\_\_\_ be your book. It’s got your name on it.

***A*** can ***B*** must ***C*** perhaps ***D*** may

1. Imagine you \_\_\_\_ have a superpower, which one would you choose?

***A*** could ***B*** would ***C*** can ***D*** might

1. The experiment \_\_\_\_ under strict medical supervision.

***A*** we carried out ***B*** was carried out ***C*** have been carried out ***D*** was carrying out

1. I’m not surprised your camera isn’t working. It \_\_\_\_ out in the rain!

***A*** shouldn’t have left ***B*** shouldn’t have been left ***C*** shouldn't to be left ***D*** should be left

1. I`d like you to \_\_\_\_ at the meeting of the Travellers Club.

***A*** tell ***B*** talk ***C*** speak ***D*** say

Голова фахової

атестаційної комісії \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Литвиненко Г.І.

(підпис)