北海道大学 医学部 歯学部

H-31 (A)

英 語

 $12:30\sim14:00$

解答上の注意

- 1. 試験開始の合図があるまで、この問題紙を開いてはならない。
- 2. 問題紙は16ページある。
- 3. 解答用紙は 解答用紙番号 英語 0-1 と 解答用紙番号 の 2 枚である。
- 4. 解答用紙は2枚とも必ず提出せよ。
- 5. 受験番号および座席番号(上下2箇所)は、監督者の指示に従って、すべての解答用紙の指定された箇所に必ず記入せよ。
- 6. 解答はすべて解答用紙の指定された欄に記入せよ。
- 7. 必要以外のことを解答用紙に書いてはならない。
- 8. 問題紙の余白は下書きに使用してもさしつかえない。

Climate change! Climate change! Climate change! This has increasingly become a buzzword in the last five years or so. It is always on the news. People are constantly talking about it. Across academia, government, and the private sector, climate change is one of the most discussed topics. The attention it is getting has been immense. This is most likely because of its unquestionable impact on our environment.

Studies show that climate change affects the natural features of the earth. Heavy rainfall can cause seashores to overflow in some regions, while drought can cause dry lands in others. We have also been informed about the increase of the earth's average surface temperature. This means that we will experience excessively hot weather during the summer, while slightly colder weather will be felt during the winter. Scientists expect that these global weather changes will create stronger storms and sudden floods in some areas, while others will see harsher droughts or dryness.

While there is clear evidence that climate change can affect the geography of the planet and generate severe weather conditions, can it have an impact on our health, too? Recent studies on climate change actually indicate that it has a direct impact on public health. According to Patricia Espinosa, executive secretary of United Nations Climate Change, and Richard Horton, editor-inchief of the British medical journal *The Lancet*, the change of weather and climate is already producing harmful effects on our health.

The World Health Organization (WHO) considers climate change as one of the main reasons why more people are getting sick. This is because climate change can have an impact on the social and environmental factors that relate to health, like food, water, air, and housing. If we ignore the ill effects of climate change on health, the WHO estimates that there will be about 250,000 more deaths per year between 2030 and 2050: 38,000 among the elderly

because of heat stroke, 48,000 due to diarrhea, 60,000 because of malaria, and 95,000 among children with poor nutrition.

This is, indeed, a major concern that we all should address and prepare for as threats of climate change are definitely alarming. These health risks, furthermore, are so severe that medicine and technology are not advancing fast enough. To know (a) these health threats might look like, let's look at three situations where climate change is clearly influencing people's health.

The worsening spread of dengue fever, or "bone-break fever", is directly related to the change in global weather conditions. Normally found in warmer areas, the black-and-white striped mosquitoes that carry the virus are now living longer and populating even in higher, traditionally cooler regions. As reported by the WHO, dengue is now widespread in 100 countries, causing up to 50 to 100 million new infections a year with 22,000 deaths, mainly among children.

Another effect of climate change is that of water-related illnesses. People can become sick if exposed to unclean water. Flooding resulting from heavy rainfall and high water can increasingly pollute areas of water, including the water we drink. Because of this, people may suffer from illnesses like cholera, dysentery, and typhoid. According to the WHO, there are over 500,000 children aged under 5 years who are at risk every year because of a lack of safe water.

Heat waves are another predicted consequence of climate change. In the United States, for example, they are believed to be the most dangerous natural disasters with more people killed than hurricanes, earthquakes, and other disasters combined. Moreover, extreme heat worsens the health condition of those with lung and heart diseases, particularly among elderly people.

Although these health threats caused by climate change are disturbing, there are ways to prepare for and address these problems—like having early warning systems for extreme weather and lessening its impact on

disadvantaged sectors of society, such as the young and elderly. Educating healthcare professionals about its negative effects, raising public awareness, and understanding the dangers of climate change to health should also be realized. Through these efforts, we hope to reduce its damaging effects and save more lives. Climate change may be unavoidable, but we can somehow (b) its impact on human health.

- 注) dysentery:赤痢 typhoid:腸チフス
- 問 1 下線部(1)の言い換えとして最も適切なものを(A)~(E)から1つ選び、記号で答えなさい。
 - (A) other scientists predict harsher droughts or dryness.
 - (B) other storms and floods will lead to harsher droughts or dryness.
 - (C) other weather changes will create harsher droughts or dryness.
 - (D) there will be harsher droughts or dryness in other areas.
 - (E) there will be other weather changes such as harsher droughts or dryness.
- **問 2** 下線部(2)が表す内容を20字以内の日本語で簡潔に答えなさい。
- 問 3 空欄(a)に当てはまる語(一語)を答えなさい。
- 問 4 下線部(3)を, they が指す内容を明示して, 日本語に訳しなさい。
- **問** 5 空欄(b)に当てはまる最も適切な語を(A)~(E)から1つ選び,記号で答 えなさい。
 - (A) advance
- (B) control
- (C) experience

- (D) produce
- (E) spread

- 問 6 以下の1~11の文には、本文の内容に合致するものが6つある。それらの文を本文で述べられている順に並べ、番号で答えなさい。なお、最初の文は1である。
 - 1. Climate change changes geography and the weather.
 - 2. Dengue fever kills millions of people each year.
 - 3. Education may decrease health risks.
 - 4. Floods poison water.
 - 5. Half a million children die from drinking unsafe water.
 - 6. Heat waves and hurricanes harm elderly people.
 - 7. Medicine and technology have kept up with the health problems of climate change.
 - 8. People with lung diseases suffer in extreme heat.
 - 9. Research shows that climate change harms our health.
 - 10. The WHO predicts millions of deaths per year.
 - 11. Warm weather spreads dengue fever to cool areas.

Think about all your important beliefs and ideas. They may relate to what you study, how you view yourself and others, your political viewpoints, and religious beliefs. Now ask yourself if you prefer to look for evidence that supports and strengthens those ideas, or do you like to look for evidence that might weaken or disprove them? According to social psychologists, we often look for ways to confirm our views, and often avoid attacking them.

Peter Wason first explored this almost sixty years ago in a classic experiment. He presented twenty nine psychology undergraduates with three numbers: 2, 4, and 6. They were told that their goal was to figure out a particular rule that explained this series of numbers. The actual rule used was very simple: the second number had to be larger than the first number, and the third number had to be larger than the second one. To help them complete the task, the students were allowed to write down any series of three numbers and show them to the experimenter. Every time the numbers matched the rule, the experimenter would tell them it was a match, but wouldn't explain the reason. They could do this as many times as they liked until they were sure that they had figured out the rule. At that point, they could write it down and show it to the experimenter. The students were told to continue testing series of numbers and writing down possible rules until they arrived at the correct one.

Despite the fact that the actual rule was very simple, only six out of the twenty nine students correctly figured it out on their first attempt. The reason for this was that the students spent most of their time trying to positively test their first ideas. For example, some of the students started by guessing that the rule related to the use of even numbers. They would then *only* write examples that included even numbers until they had persuaded themselves that the rule could only be about those numbers. What they often didn't do, for example, was include odd numbers in order to negatively test their first idea.

This way of thinking is known as *confirmation bias* and it tells us something very important about how we develop our views about the world. When we think about our beliefs, we all feel that the truth is the most important thing for us. However, we are also very powerfully influenced by the way our minds work, and we are often not aware of it. This does not just relate to our preferences for confirming our beliefs rather than disproving them. Social psychologists have also found other influences. For example, we often prefer to continue to believe something because it is useful or emotionally important to us in some way.

Universities try to address these tendencies by emphasizing the importance of skills like critical thinking and debating. (a), what can often happen is that we only critically examine new ideas or beliefs we disagree with. There is also some evidence that debating can actually strengthen your original ideas and beliefs, rather than making you question them.

So what can we do to avoid the effects of confirmation bias? One solution is to push ourselves to improve our understanding of different viewpoints. One advantage of the university seminar system is that students are free to attend the classes of many different professors. Try to find a professor that disagrees with the ideas that you have already been taught. In addition, try to carefully read books that you disagree with, and spend time talking to people that have different ideas from your own. And don't just talk to them, but train yourself to see the conversation through their eyes. You might feel that they are obviously (b), but it is important to understand why they feel the same way towards your ideas. In addition, try to view changing your ideas as exciting and challenging, and not something uncomfortable, threatening, and negative. It is very difficult to avoid confirmation bias when you are on your own. It is almost impossible when you are with a group that all agrees with the same idea. The best place to shape your thinking is therefore somewhere in the messy, ever-changing space between opposing arguments.

間 1 下線部(1)が表す内容を日本語で述べなさい。

問 2 第 3 段落で述べられている例において、下線部(2)に合致する 3 つの数字は以下の(A)~(D)のうちどれか。 **2 つ**選んで記号で答えなさい。

(A) 2, 3, 4 (B) 4, 3, 2 (C) 2, 4, 6 (D) 6, 4, 2

問 3 空欄(a),(b)に入る最も適切な語句を(A)~(E)からそれぞれ1つ 選び、記号で答えなさい。

- (a) (A) Accordingly
- (B) For example
- (C) However

- (D) Similarly
- (E) Therefore
- (b) (A) better
- (B) correct
- (C) different

- (D) identical
- (E) wrong

問 4 下線部(3)を日本語に訳しなさい。

問 5 以下の英文において、下線部に当てはまる最も適切なものを(A)~(D)から 1 つ選び、記号で答えなさい。

The article implies that attending classes of many professors with different views helps you avoid the effects of confirmation bias because

⁽A) books and conversations give you knowledge

⁽B) seminars are exciting and challenging

⁽C) you need to justify your ideas

⁽D) you see and compare different ideas

6	以下	の本	文の文	要約において,	空欄(1)~(5)に当	てはま	る最	も適
切	な語	をそ	わそ	*れ(A)~(D)から 1	つ選び,	記	号で答。	えな	さい。			
	We	teno	d to	(1) evider	ice that	con	firms o	ur '	views.	An ex	perin	nent
(2) 1	this o	claim by showir	ng that p	eop	le tend	to	repeate	dly pr	ove t	heir
in	itial	beli	efs.	This thinking	is (3)	confir	nati	on bias	. То	(4)
				oias, university								
				ese skills are b								
(s of view.						:		
			•									
(1)	(A)	create			(B)	ir	spect			
			(C)	match			(D)	s	eek			
(2)	(A)	corrected			(B)	e	xplaine	1		
			(C)	questioned			(D)) v	erified			
(3)	(A)	considered			(B)) ic	lentifie	1		
			(C)	named			(D) r	eferred			
(4)	(A)	disprove			(B) d	istance		ŧ	
			(C)	overcome			(D) . v	vithdrav	v		
(5)	(A)	conflicting			(B). d	enying			
			(C)	rojecting			(D) 0	urnrisir	ıo		

問

There is no denying that social media is an important tool for communication today. Through our social media accounts, we can easily connect and stay in touch with our family and friends. Some people, however, believe that with Twitter, Instagram, or Facebook, among others, we increasingly lose our ability to communicate face-to-face. Whichever side we are on, what is certain is that social media has changed, positively or negatively, our communication in the 21st century.

Making friends and connecting with them online is one positive consequence of social media. It is now easy to find people we can relate to, people we can learn from, and people we have common interests with. Accordingly, we are able to develop and improve our social skills. Some people, on the other hand, think that the use of social media reduces our physical communication with people. Spending a lot of time online will prevent us from acquiring and expanding important social skills like examining body language, facial expressions, or vocal tones. In other words, our capacity to connect with people face-to-face has declined because of social media.

Some people, meanwhile, consider social media helpful to those who are experiencing depression or hopelessness. Take for example Josh, a teenager, who was suffering from depression because of family problems. On the advice of his best friend, he opened an account on Instagram and shared his story with his "followers." After a day or two, there was an overflow of encouraging words and support not just from his friends and relatives but also from strangers on Instagram. Through Instagram, he was able to recover from his illness. He was also able to convey a message of hope to other people, like him, who were experiencing depression. Unfortunately, this was not the case for Mark, whose posts on Facebook became targets of cyberbullying attacks. These instances of online harassment have led him to feel miserable and

depressed. He also attempted to end his life once. This incident prompted his parents to bring him to a mental institution for therapy and medication.

With the positive and negative effects of social media, we now wonder how social media affects us personally. Is it affecting us in a favorable or damaging way?

Answer questions A to C in English. You may use words and ideas from the text, but you must not copy complete sentences.

Question A

Complete the following sentence summarizing paragraph 2.

While social media can develop our online social skills, it can also lead to a

Question B

Describe how social media helped Josh and hurt Mark.

Question C

The text describes two contrasting views of social media. In your opinion, is social media beneficial and/or harmful for you? Write an 80—100 word paragraph, providing specific reasons to support your opinion.

A Read the following transcript [I] of a conversation between British and Japanese professors in Japan, and then read the summary of the transcript [II]. The summary contains 12 blanks. For each blank, choose the most appropriate word or phrase from the list. Each choice can be used only once. On your answer sheet, write the letter (A, B, C, etc.) that corresponds to your choice.

[I]

British Professor (BP): One of my students really confused me today.

Japanese Professor (JP): Really? It's usually us confusing them. What happened?

BP: I was asking them to think of important advice they had received from their parents when they were young. This one student told me about his mother's advice, "When you see blue, look right, look left, and then run!"

JP: He was talking about the lights and crossing the road, right?

BP: Well, I guessed that, but I couldn't understand why he said blue rather than green. When I asked him, he laughed and replied, "Blue is green!" That was when I got really confused.

JP: Did you figure it out?

BP: Hmm, I think it has something to do with how blue and green are used in Japanese, right?

JP: Yes. In Japanese things like the color for crossing the road and the color of some green vegetables is ao, which is usually translated as blue. Historically there was no clear separation between blue and green in the Japanese language. The modern word for green, midori, didn't appear until much later. Even after people began to use this term, it was never applied to every object that is considered green in many other languages.

BP: I see. I've just started learning Japanese, so I didn't know that. But I'm familiar with other languages that have this overlap between blue and green. For example, the Berinmo people in Papua New Guinea do not have different words for the two colors. Instead, they use the same word for both. Actually, linguists have seen this in such a wide range of cultures that they have begun to use the term grue to describe this type of color. Some languages also have two distinct terms for light blue and blue.

JP: Right, and Japanese is one of those languages. We have *mizuiro* for light blue and, as you now know, *ao* for blue. But the interesting question is whether Japanese speakers actually see colors in a different way from people in other cultures.

BP: You mean perhaps they are just putting colors into different groups but seeing the same thing?

JP: Exactly, or perhaps our language really does affect our thinking.

BP: Researchers have been arguing about that for almost a century!

JP: And there have been many studies in that time, but the disagreement continues.

BP: Yes. I remember reading about an experiment done in 2009. It was designed to test how bilingual speakers of Greek and English viewed the differences between light blue and blue. The experimenters wanted to focus on Greek-English bilingual speakers because the Greek language also has two separate words for light blue and blue. The people in the experiment were first shown colors representing the two shades or types of blue. They were then asked to judge how big the difference was between the different shades. The results showed that those people that spent more time in the UK generally viewed the two shades as closer together.

- JP: Did you know that they followed that study up with another one that included Japanese speakers?
- BP: Really?
- JP: Well, from what I remember, it was a study carried out by an international team of British and Japanese researchers in 2010. This time the study included both Japanese and English native speakers. They were asked to rate the difference between various shades of light blue, various shades of blue, and a mixture of shades of both light blue and blue.
- BP: So what were the results?
- **JP**: The Japanese native speakers reported the biggest differences when they were comparing shades of light blue and blue. This suggests that the categories of *mizuiro* and *ao* were influencing their answers. In contrast, the differences reported by the English speakers were more equally spread between the different shades.
- **BP**: Does this confirm that in some contexts language influences the way we view the world?
- JP: It will always be controversial. Many researchers agree that language is one of the important factors causing the difference. However, other researchers point to the social influences of different cultures and not language itself. What do you think?
- BP: Hmm, it's difficult to say. However, it would make an interesting essay question for the students!

The conversation begins with a British professor talking to a Japanese professor about a lesson he had with his Japanese students. He explains how one of his students (1) him by referring to one of the colors of traffic lights as blue (2) of green. The Japanese professor points out that in the Japanese language some objects that are usually thought of as green in many languages are (3) to using a Japanese word for blue. The British professor then describes similar (4) in other languages and cultures, such as the Berinmo in Papua New Guinea. They also discuss how Japanese and other languages also have (5) words for light blue and blue.

This leads to a discussion about whether Japanese people are (6) different things when they look at objects, or whether they are just (7) different terms to describe them. The British professor then brings up a study that investigated how bilingual speakers of Greek and English (8) different shades of blue. He notes that the conclusion of the study was that those people who spent more time in the UK were (9) likely to describe the shades of light blue and blue as very different from each other.

The Japanese professor continues the conversation by bringing up a second study that further examines the idea that language can (10) the way we think. This study involved Japanese and English speakers and found that the Japanese speakers judged shades of light blue and blue to be further apart. Both professors conclude the discussion by noting the (11) in interpreting the results of these studies, with the Japanese professor observing that language could be influencing thought or that other (12) factors could be at work.

			******		1
(A)	assessed	(B)	cultural	(C)	characteristics
(D)	separate	(E)	less	(F)	effect
(G)	society	(H)	in contrast	(J)	using
(K)	instead	(L)	disagreeing	(M)	more
(N)	felt	(O)	mistakes	(P)	surprised
(Q)	difficulty	(R)	need	(S)	affect
(T)	designed	(V)	critical	(W)	reinforce
(X)	referred	(Y)	seeing	(Z)	increasing