

(全8の1)

1 次の1～8の( )に入れるのに最も適切なものを、下の(a)～(d)からそれぞれ1つずつ選び、その記号をマークせよ。

- Studies of dinosaur fossils have revealed large amounts of information about their dietary habits when they ( ) the earth.  
(a) stood (b) roamed (c) blocked (d) located
- My brother ( ) on a journey to twelve countries that would eventually take him three months to complete.  
(a) sheltered (b) wedged (c) trapped (d) embarked
- Going to a 4DX movie theater not only allows you to experience the sounds and sights of a film, but it also adds many ( ) aspects to the viewing experience.  
(a) sensory (b) charitable (c) merciful (d) filthy
- At first, I was not able to ( ) what the text said. But, I soon remembered studying this content in class and the meaning came back to me.  
(a) fasten (b) decipher (c) sequester (d) collapse
- After almost failing her second year in university, Kate ( ) stated that she would do her best in her third year of study.  
(a) solemnly (b) accusingly (c) disruptively (d) illegally
- The dress code for the event was ( ), but the guests already knew they had to wear formal wear in order to get in the door.  
(a) extraordinary (b) improper (c) pathetic (d) unstated
- The ( ) of the food in the restaurant was such that the owners had to close it down for a whole month last summer.  
(a) sufficiency (b) amplitude (c) inferiority (d) brilliance
- The city's river was so ( ) that it badly affected the drinking water in the area for the majority of the residents.  
(a) laundered (b) contaminated (c) promoted (d) stimulated

(全8の2)

2 次の1と2の各英文には、まとまりをよくするために取り除いた方がよい文が一つある。取り除く文として最も適当なものを、それぞれ下線部(a)～(d)のうちから一つずつ選び、その記号をマークせよ。ただし、英文1と2は独立したものである。

1.

In the age of social media, celebrities are wielding more power and influence than ever before. Being in a hit Netflix show is enough to give a previously unknown actor ten million Instagram followers in a matter of days. On the whole, celebrities seem to use their platforms for posting red carpet selfies, reels of makeup routines, product sponsorships — and for activism.

It's become normal to scroll through a favorite Hollywood actor's Instagram page and see, nestled amongst photos of them at puppy yoga and sushi bars, a pastel square containing a few lines about some social issue or another. Comments under such posts typically range from gushing ("glad I follow someone so good-hearted!") to admiring ("respect for talking about this"). But while, on the surface, such acts of activism may seem benign, they can be highly harmful. The post is then circulated amongst celebrities and presented to their countless followers.

Unfortunately, such activism is frequently performative. While activism in its own right refers to the championing of social or political change, performative activism describes activism executed to 'increase one's social capital rather than because of one's devotion to a cause.'

For instance, a celebrity might bring an issue up once and then never mention it again, even when the problem's still ongoing. Or, worse, the celebrity may talk about a topic despite having done no research into it.

(Ahmed, A. (2024). *The Teen Mag*. より一部改変)

2.

Tourists are arriving in Japan in greater numbers than ever. March's 3.08 million arrivals set a new monthly record. With the yen falling to levels unseen in decades, foreign tourists are finding the country an unbelievable bargain — while Japanese are finding it harder to travel overseas themselves. These trends have led some observers to compare Japan with Greece, long known more for drawing in visitors from the rest of Europe than for sending out its own tourists. While Japan and Greece are dealing with a post-pandemic tourism boom, there are distinct differences.

Greece is heavily reliant on tourism, which accounts for up to a fifth of its gross domestic product. The country, with a population of 10.4 million, drew 36 million visitors last year, when tourism revenues reached 20.6 billion euros (\$22.1 billion). For Greece, Athens and especially the country's sun-kissed islands are top draws, but water management and marine litter are becoming major problems.

Tourists to Japan visit a country of islands too, but most head to the major cities of Honshu, the largest island, including Tokyo, Osaka and Kyoto, and tourism is a much smaller part of the overall national economy. Japan plays up its four seasons and their accompanying cuisine and festivals. Mediterranean Greece simply has high and low tourist seasons. Taketomi Island, one of Japan's southernmost isles, instituted a voluntary tourism tax in 2019 to raise funding for infrastructure after annual arrivals topped 1 million.

(Snow, N. (2024). *Nikkei Asia* より一部改変)

- 3 次の英文が完成した文章になるように、文意に沿って、(1)～(4)の(a)から(f)を並べ替えた後、それぞれ1番目、3番目、6番目にくるものの記号をマークせよ。

### Beethoven's Genes Reveal Low Predisposition for Beat Synchronization

Ludwig van Beethoven, one of the most celebrated musicians in human history, has a rather low genetic predisposition for beat synchronization, according to a *Current Biology* study co-authored by Vanderbilt University Medical Center (VUMC) and the Max Planck Institutes for Empirical Aesthetics in Frankfurt am Main, Germany, and for Psycholinguistics in Nijmegen, the Netherlands.

The question of to (1) [(a) molecular methods make it (b) factors dates back to the early days of human genetics (c) what extent are exceptional (d) possible to analyze DNA of individuals (e) human achievements influenced by genetic (f) but seems to be easier to address today as modern] throughout history.

An international (2) [(a) to investigate his genetic musical predisposition, an (b) genetic material was extracted from strands of his hair (c) ability closely related to musicality, by using (d) team of researchers (e) sequences from a 2023 study in which the composer's (f) analyzed Beethoven's DNA].

"For Beethoven, we used his recently sequenced DNA to calculate a polygenic score as an indicator for his genetic predisposition for beat synchronization," said Tara Henechowitz, B. Mus. Hons, M. A., a current PhD Candidate at the University of Toronto, recent visiting graduate student with the Vanderbilt Human Genetics Program, and the paper's second author.

"Interestingly, Beethoven, one of the most celebrated musicians in history, had an unremarkable polygenic score for general musicality compared to population samples from the Karolinska Institute in Sweden and Vanderbilt's BioVU Repository," she said.

The authors noted that it would be wrong to conclude from Beethoven's low polygenic score that his musical abilities were unexceptional. "Our aim was to use this as an example of the challenges of making genetic predictions for an individual who lived over 200 years ago," Henechowitz said. "The mismatch (3) [(a) prediction and Beethoven's musical (b) given child will end up being musically (c) us a definitive answer about whether a (d) it demonstrates that DNA tests cannot give (e) between the DNA-based (f) genius provides a valuable teaching moment, because] gifted."

Henechowitz said the study (4) [(a) to people's musical skills, noting that prior (b) by all genetic factors (c) found an average heritability, which (d) studies have (e) is the proportion of individual differences explained (f) does not discount that DNA contributes], of 42% for musicality.

"In the current era of 'big data' such as Vanderbilt's BioVU repository, we have had the opportunity to look in fine detail at large groups of people to uncover the genetic underpinnings of traits such as rhythm ability or being musically active. The current study and other recent work also suggest that environment plays a key role in musical ability and engagement as well," said co-author Reyna Gordon. "Polygenic scores are intended to work well for comparisons of large groups of people to tell us how genetic risk for one trait relates to the genetics involved in other traits," Henechowitz said.

(Wesseldijk, L. W. *et al.* (2024). *Current Biology* より一部改変)

- 4 次の英文を読んで、以下の問いに答えよ。

Some authors or content creators make the spurious claim that people in Japan hold a positive attitude towards menopause, seeing it as a natural stage of life or even renewal of life. In actual fact, societal attitudes in Japan towards both women and menopause are very problematic. Limited awareness and medical response — especially in regard to bone, muscle, heart, brain and vaginal health — has simply resulted in millions of women in Japan suffering unnecessarily.

The traditional view in Japan has emphasised women just simply accepting and living with bodily changes. Just as women are seldom given options other than giving birth without pain intervention because it is 'natural', many women go without hormone therapy because it too is 'natural'. This is largely due to the (1) \_\_\_\_\_ of informed dialogue about menopause in Japanese society. Many women only talk with their friends or female family members, who typically (2) \_\_\_\_\_ them to take traditional Chinese medicine to alleviate common symptoms. Unfortunately, many never even visit a gynaecologist, believing women's clinics to be places for those with menstrual or pregnancy issues. Such hesitations are reinforced by the fact that many women's clinics typically fail to mention menopause counselling or treatment on their websites. Confirming this point statistically, a government sponsored study in 2014 found that only 5.3% of Japanese women had an excellent awareness of long-term issues associated with lack of oestrogen and progesterone and treatment options compared to 34.6% of American women. Unfortunately, the study did not even begin to explore how up-to-date the actual knowledge levels of the gynaecologists in Japan are.

Importantly, the silence (3) \_\_\_\_\_ menopause has slowly been putting a dent in the Japanese economy since the 1990s. Women spend approximately 40% of their lives in a stage of menopause, and they now constitute 44% of Japan's workforce. While the number of women in executive positions is still lagging behind other countries, the number of those assuming leadership roles is noticeably increasing. Despite this, women's health awareness in the form of webinars or seminars in the workplaces is basically non-existent in Japan. Furthermore, while menstrual leave is a legal right — typically unpaid — there are no (4) \_\_\_\_\_ for menopausal leave. Instead, female leaders and workers tend to put their own health and mental health issues on the back burner because they are reluctant to show any form of weakness in the workplace. They just soldier on (5) \_\_\_\_\_ their pain and other symptoms. But at what cost?

Women's suffering is actually proving very costly for the country. According to data recently (6) \_\_\_\_\_ by Japan's Trade Ministry, the annual economic cost to society stemming from women's health conditions, such as gynecologic cancer, and menopause, resulting in coronary heart disease, osteoporosis and so on, is now estimated to be around 3.4 trillion yen (\$22.9 billion USD). As the Japanese Government continues to slide into ever greater public debt as its population collapses, it is clear that this central part of women's health in Japan must no longer be downplayed.

(全8の5)

1. 本文の空所(1)～(6)に入れるのに最も適切な語を、下記の(a)～(d)からそれぞれ1つ選び、その記号をマークせよ。

- |                     |               |              |              |
|---------------------|---------------|--------------|--------------|
| (1) (a) less        | (b) lack      | (c) loss     | (d) lent     |
| (2) (a) refuse      | (b) add       | (c) urge     | (d) eschew   |
| (3) (a) surrounding | (b) verifying | (c) ringing  | (d) closing  |
| (4) (a) provisions  | (b) pavillons | (c) pensions | (d) passions |
| (5) (a) inducing    | (b) inviting  | (c) incoming | (d) ignoring |
| (6) (a) withheld    | (b) issued    | (c) fudged   | (d) promoted |

2. 本文の内容と適合するものを下記の(a)～(h)から3つ選び、その記号をマークせよ。

- (a) In Japan, men and women are not very engaged in dialogue about menopause.
- (b) Japanese women are often encouraged to seek hormone replacement therapy.
- (c) Few Japanese women talk about menopause symptoms outside their friends or family.
- (d) Research shows a minor gap in menopause awareness between Japan and the US.
- (e) Menopausal women are widely supported by companies in Japanese society.
- (f) The lack of awareness about menopause is negatively impacting the Japanese economy.
- (g) Women in leadership roles are actively prioritising their own health needs.
- (h) Japanese workplaces now offer menopause workshops and menopause leave.

(全8の6)

5 次の英文を読んで、以下の問いの答えを、それぞれ(a)～(d)より1つずつ選びマークせよ。

Humans help each other—it's one of the foundations of civilized society. But a new study by scientists at the University of California, Berkeley, reveals that a lack of sleep blunts this fundamental human attribute, with real-world consequences. Lack of sleep is known to be associated with an increased risk of cardiovascular disease, depression, diabetes, hypertension and overall mortality. However, these new discoveries show that a lack of sleep also impairs our basic social conscience, making us withdraw our desire and willingness to help other people.

In one portion of the new study, the scientists showed that charitable giving in the week after the beginning of Daylight Saving Time, when residents of most states "spring forward" and lose one hour of their day, dropped by 10%—a decrease not seen in states that do not change their clocks or when states return to standard time in the fall. The study, led by UC Berkeley research scientist Eti Ben Simon and Matthew Walker, a UC Berkeley professor of psychology, adds to a growing body of evidence demonstrating that ( ) sleep not only ( ) the mental and physical well-being of an individual, but also ( ) the bonds between individuals—and even the altruistic sentiment of an entire nation. "Over the past 20 years, we have discovered a very intimate link between our sleep health and our mental health. Indeed, we've not been able to discover a single major psychiatric condition in which sleep is normal," Walker said.

The new report describes three separate studies that assessed the impact of sleep loss on people's willingness to help others. In the first study, the scientists placed 24 healthy volunteers in a functional magnetic resonance imager (fMRI) to scan their brains after eight hours of sleep and after a night of no sleep. They found that areas of the brain that form the theory of mind network, which is engaged when people empathize with others or try to understand other people's wants and needs, were less active after a sleepless night. "When we think about other people, this network engages and allows us to comprehend what other person's needs are: What are they thinking about? Are they in pain? Do they need help?" Ben Simon said. "However, this network was markedly impaired when individuals were sleep deprived. It's as though these parts of the brain fail to respond when we are trying to interact with other people after not getting enough sleep."

In a second study, they tracked more than 100 people online over three or four nights. During this time, the researchers measured the quality of their sleep—how long they slept, how many times they woke up—and then assessed their desire to help others, such as holding an elevator door open for someone else, volunteering or helping an injured stranger on the street. "Here, we found that a decrease in the quality of someone's sleep from one night to the next predicted a significant decrease in the desire to help other people from one subsequent day to the next," Ben Simon said. "Those with poor sleep the night prior were the ones that reported being less willing and keen to help others the following day."

The third part of the study involved mining a database of 3 million charitable donations in the United States between 2001 and 2016. Did the number of donations change after the transition to Daylight Saving Time and the potential loss of an hour of sleep? They found a 10% drop in donations. This same dent in compassionate gift-giving was not seen in regions of the country that did not change their clocks. "Even a very modest 'dose' of sleep deprivation—here, just the loss of one single hour of sleep opportunity linked to daylight saving time—has a very measurable and very real impact on people's generosity and, therefore, how we function as a connected society," Walker said. "When people lose one hour of sleep, there's a clear hit on our innate human kindness and our motivation to help other people in need."

An earlier study by Walker and Ben Simon showed that sleep deprivation forced people to socially withdraw and become more socially isolated. A lack of sleep also increased their feelings of loneliness. Worse still, when those sleep-deprived individuals interacted with other people, they spread their loneliness to those other individuals, almost like a virus, Walker said. "Looking at the big picture, we're starting to see that a lack of sleep results in a quite asocial and, from a helping perspective, anti-social individual, which has manifold consequences to how we live together as a social species," he said. "A lack of sleep makes people less empathetic, less generous, more socially withdrawn, and it's infectious—there is contagion of loneliness." "The realization that the quantity and quality of sleep affects an entire society, caused by an impairment in prosocial behavior, may provide insights into our societal state of affairs in the present day," Walker added.

(University of California—Berkeley (2022). *Science Daily* より一部改変)

(全8の7)

1. Which is the best summary of the passage?

- (a) Digestive diseases can lead to physical and mental illnesses.
- (b) To avoid insomnia, cardiovascular diseases must be treated first.
- (c) Mortality rates have improved thanks to Daylight Saving Time.
- (d) Sleep shortages can make people less supportive of others.

2. Which combination of words most naturally fill the blanks in the underlined part, "that ( ) sleep not only ( ) the mental and physical well-being of an individual, but also ( ) the bonds between individuals"?

- (a) inappropriate, disturbs, benefits
- (b) inadequate, harms, compromises
- (c) imbalanced, improves, diminishes
- (d) insufficient, enhances, damages

3. Which is the best summary of the first study?

- (a) Taking brain health supplements stimulates and activates human relations.
- (b) Sleep is related to brain parts for understanding other people's needs.
- (c) Certain parts of the brain are markedly stimulated by meditation.
- (d) We may sleep better if we receive more attention from other people.

4. What was the main goal of the second study?

- (a) To see if people become less eager to help others after a night of poor sleep.
- (b) To compare the number of times people slept and woke up after bad experiences.
- (c) To identify the kinds of people who often help an injured stranger on the street.
- (d) To develop sleep-related products for patients with chronic sleep problems.

5. Which is the best conclusion for the third study?

- (a) People were less serious in 2001 as compared to 2016.
- (b) People were more serious in 2001 as compared to 2016.
- (c) People were less giving after having one less hour of sleep.
- (d) People were more giving after having one extra hour of sleep.

6. Which is the best implication of the studies reported in the passage?

- (a) The use of Daylight Saving Time should be altogether banned.
- (b) There is a passive relationship between donation-giving and well-being.
- (c) Lack of sleep should be actively discouraged to improve societal well-being.
- (d) People should be more considerate of others to improve their sleep quality.

7

(全8の8)

6

1. 次の日本語を読み、内容を30語程度の英語でまとめよ。なお、設定語数を大幅に超えるもの、全訳をしたものは採点の対象としない。

ギャンブルで大当たりした直後は、確率を客観的に評価できなくなり、「もう1回当たりそうだ」と判断しがちになる。そんな研究結果を、筑波大医学医療系の山田洋准教授(神経経済学)らがまとめた。

(鷗志田(2024). より一部改変)

2. 次の英文は *New Zealand Opens First 'Kiwi Hospital' for Injured Birds* の見出しで始まる全21段落ある新聞記事から最初の2段落を抜粋したものである。記者がこの記事で伝えたいニュースの要点を、50字程度の日本語でまとめよ。なお、設定字数を大幅に超えるもの、全訳をしたものは採点の対象としない。

New Zealand on Friday opened its first hospital exclusively treating kiwi birds, and vets have already nursed the first patient back to health—a chick nicknamed Splash that tumbled into a swimming pool.

Rising numbers of the once-threatened national bird have led to the construction of a purpose-built facility in Kerikeri, a three-hour drive north of Auckland.

(時事通信。(2024). *Jiji Press News* より一部改変)

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