

(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。

- Even if contentious or (), scientists should be encouraged to explore various sorts of science-based issues that affect human health and wellness.
(a) methodological (b) tactical (c) transmittable (d) unconventional
- The monthly membership fee of that fitness club is expensive, but the members are permitted to () their membership at any time, after submitting notice to its main office, and the monthly fee is refundable on a daily basis.
(a) advance (b) contract (c) deposit (d) withdraw
- The company has been able to keep 45% of its market share by effectively () their long history and reputation for quality products.
(a) composing (b) leveraging (c) upending (d) reviewing
- Not only higher education, but also primary and secondary education is in a period of intensified uncertainty, due in large part to the pandemic and the need to () shift from face-to-face to online learning and teaching.
(a) abruptly (b) conclusively (c) impulsively (d) bizarrely
- In order to () the mission into the future, the company has decided to emphasize the importance of the power of people above all else.
(a) accomplish (b) activate (c) propel (d) promise
- My brother and his wife managed to () their naughty children by letting them play games on their smartphones.
(a) appease (b) disturb (c) patronize (d) relieve
- Many of the patients have difficulty with initiation of sleep, and a safer and more effective () agent is desired.
(a) susceptible (b) survival (c) treatable (d) therapeutic
- Methods to preserve data integrity are designed to ensure that data has not been () or maliciously modified, altered or destroyed.
(a) accidentally (b) concurrently (c) officially (d) subsequently

(全8の2)

2 次の1と2の各パラグラフ(段落)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、各パラグラフは独立したものである。

1.

There are more than 3 million certified scuba divers in the world, yet only two places to overnight beneath the sea. Both habitats are off the coast of Key Largo, Florida, and both were born as deep-sea labs. But that's where the similarities end. ^(a) You might have heard that scuba is the abbreviation for "Self-Contained Underwater Breathing Apparatus." ^(b) One of the habitats, the Jules Undersea Lodge, is now a fully operational hotel (with rooms going for ^(c) between \$250 and \$350 a night). The other—a lab called Aquarius owned by the National Oceanic and Atmospheric Administration (NOAA) and operated by the University of North Carolina at Wilmington—could change how we train astronauts for trips to the space station. ^(d) In October, NASA and NOAA conducted a weeklong experiment aboard Aquarius to explore using it to simulate space missions. Both agencies expect to benefit from the experience, since the extreme environments of sea and space present similar challenges for aquanauts and astronauts.

(Ward, M.E. (2002). *Popular Science* より一部改変)

2.

The Okinawa Centenarian Study, started by Dr. Makoto Suzuki back in 1975, is the world's longest, continuously running study of centenarians. ^(a) The team has studied more than a thousand 100-year-olds to understand the genetic and environmental lifestyle factors responsible for healthy ageing. ^(b) The findings shared in their 2001 book included clean arteries and low cholesterol; low risk of hormone-dependent cancer, with 80% less breast and prostate cancer than North Americans; strong bones, with half the risk of hip fractures of North Americans; lean and fit bodies; and remarkable mental clarity. ^(c) All this means the burden on Okinawa's healthcare system is lower, as the population ages. ^(d) A hip fracture normally requires surgical procedures for recovery and is one condition to avoid especially in one's old age. Healthier ageing could also bring economic benefits, according to the World Economic Forum's Global Future Council on Healthy Ageing and Longevity.

(Whiting, K. (2021). *The World Economic Forum* より一部改変)

(全8の3)

- 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。

U.S. Coastline to See Up to a Foot of Sea Level Rise by 2050

The United States is expected to experience as much sea level rise by the year 2050 as it witnessed in the previous hundred years. That's according to a report updating sea level rise decision-support information for the U.S. released in partnership with half a dozen federal agencies.

The *Sea Level Rise Technical Report* provides the most up-to-date sea level rise projections for all U.S. states and territories by decade for the next 100 years and beyond, based on a combination of tide gauge and satellite observations and all the model ensembles from the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). The report (1) [(a) an additional 10–12 inches by 2050 (b) with specific amounts (c) projects sea levels (d) due to land (e) varying regionally, mainly (f) along the coastline will rise] height changes.

The report updates the federal government's 2017 sea level rise projections, and provides additional information on tide, wind, and storm-driven extreme water levels affecting current and future coastal flood risk. A suite of federal tools are using this data, including the National Oceanic and Atmospheric Administration (NOAA) Sea Level Rise Viewer, which are critical to the Administration's commitment to tackle the climate crisis by making actionable climate data accessible to those who need it.

For businesses along the coasts of the United States, knowing what to expect and how to plan for the future is critical. These updated projections will help businesses, and the communities they support, understand risks and make smart investments in the years ahead. The latest data means that (2) [(a) cause climate change while, at the same time (b) their efforts to cut the (c) help coastal communities (d) government agencies must redouble (e) become more resilient in the face (f) greenhouse gases that] of rising seas.

"This is a global wake-up call and gives Americans the information needed to act now to best position ourselves for the future," said Rick Spinrad, Ph.D., NOAA Administrator. "As we build a Climate Ready Nation, these updated data can inform coastal communities and others about current and future vulnerabilities in the face of climate change and help them make smart decisions to keep people and property safe over the long run."

The report also (3) [(a) by 2050 will create a profound (b) level rise expected (c) of storms or heavy rainfall (d) coastal flooding, even in the absence (e) increase in the frequency of (f) finds that the sea]. By 2050, moderate flooding—which is typically disruptive and damaging by today's weather, sea level and infrastructure standards—is expected to occur more than 10 times as often as it does today, according to researchers. These numbers mean a change from a single event every two to five years to multiple events each year, in some places.

This report supports previous studies and (4) [(a) confirms that sea (b) the world (c) rate, endangering (d) levels are continuing (e) communities around (f) to rise at an alarming]. The science is indisputable and urgent action is required to mitigate a climate crisis that is well underway.

(Sweet, W.V. et al. (2022). *National Oceanic and Atmospheric Administration, National Ocean Service* より一部改変)

(全8の4)

- 4 次の英文を読んで、以下の問いに答えよ。

It is usually in our most vulnerable times of our lives that we seek help from doctors, counselors, and psychologists to work through any troubles and hopefully heal. But how sure can we be that our (1) matters remain confidential?

In Europe, confidentiality is considered a fundamental human right. There are a few exceptions to the rule—when someone is at risk of harm, incidents of terrorism, or if a police warrant has been issued for the information. (2) there is a warrant, written consent by the client is always required to release any information. In the case of a warrant, the professional is also obliged to tell the client about the court order.

People assume their information is confidential. Thus, it came as a (3) to the public in Ireland that the Department of Health had been collecting information and building dossiers about children with autism and their parents without their knowledge. These particular families had made legal claims against the state in regard to the quality of special educational provisions in the school system. In short, they felt that the school system had not supported their children enough. However, their claims had long become dormant due to lack of funds.

The dossiers not only contained information about their medical condition but also a lot of educational information, all of which had been sourced from doctors, psychologists, school counselors and various other specialist services. In addition to medical and social care reports, the dossiers also included school reports, original documents, images, and videos.

After a current affairs programme blew the whistle, the public responded in confusion and anger. The Department of Health then released a statement saying information sharing, especially in relation to special education needs proceedings, was a "normal practice". Observers, however, felt an ethical (4) had taken place. All the more so because the department had explicitly told the involved professionals not to tell the children, their families, or their solicitors.

Data management specialists then came forward to say the Department of Health had broken Irish law. Furthermore, it had infringed a code of fundamental human rights as laid down in European law. Additionally, respected psychologists, interviewed on various news shows, noted it is (5) that any qualified counselor could have ever thought it is okay to share information without explicit consent in this day and age.

As a result of this incident, many people are now questioning how confidential their medical, psychological and educational information is. They are asking for more (6) on what their legal rights are. They are also asking who exactly can see what and why. The reputation of the Department of Health has clearly been damaged. Furthermore, the incident has undermined the public's trust in various support services, causing vulnerable people to hesitate about seeking help when they most need it.

(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) public | (b) private | (c) primary | (d) peculiar |
| (2) (a) Unless | (b) Conversely | (c) Moreover | (d) Similarly |
| (3) (a) commotion | (b) shock | (c) relief | (d) assurance |
| (4) (a) breach | (b) review | (c) survey | (d) warrant |
| (5) (a) virtuous | (b) inspiring | (c) incredulous | (d) expected |
| (6) (a) estimation | (b) collection | (c) hesitation | (d) clarification |

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) The Department of Health wanted to investigate how its counselors treat confidential data.
- (b) People in Europe typically believe that they have full control over their personal information.
- (c) The parents eventually approved the use of the confidential information but not the children.
- (d) Collecting data about children with special needs without their consent is a normal practice.
- (e) The risk of probable injury to the children was increased due to the data collection method described.
- (f) A court of human justice in Europe is now evaluating the reported data usage by the government.
- (g) The Department of Health wanted access to the information to adequately prepare for a lawsuit.
- (h) The collected data included information in numerous forms from the schools and other support services.

(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。

The death of popular comedian Bob Saget while on tour in Florida last month was surprising and tragic, but the injury that claimed his life is more common than you might think. According to the medical examiner in Florida who performed the autopsy, Saget most likely fell and struck the back of his head, causing bleeding on his brain. Saget's family said he probably thought nothing of the injury and went to sleep. A hotel employee found him dead in bed the next afternoon. On a typical day, brain injuries like Saget's claim the lives of more than 160 people in the United States, the Centers for Disease Control and Prevention says. About 61,000 people died from a traumatic brain injury, or TBI, in the U.S. in 2019 alone. Granted, the most common cause of death from TBI is a gun-related suicide. Car crashes and assaults are other common sources of these injuries. But almost half the hospitalizations from TBI come from the simple act of falling down, the CDC says.

Saget was 65, putting him in an age group that's particularly susceptible to damaging falls. A 2006 study published by the Journal of the American Geriatrics Society found that "in persons aged 65 and older, TBI is responsible for more than 80,000 emergency department visits each year across the U.S.; three-quarters of these visits result in hospitalization as a result of the injury." More than half of those injuries resulted from falls. According to the CDC, "data suggest that some groups are at greater risk of dying from a TBI or experiencing long-term health problems after the injury." Those groups include racial and ethnic minorities, members and veterans of the armed services, homeless people, and residents of rural areas. Everyone hits their head on something at some point in their lives. So how do you tell when there's cause for alarm? Here's some advice from three experts on brain injuries: Dr. Christopher C. Giza, director of the UCLA Steve Tisch BrainSport Program; Dr. May Kim-Tenser, a neurologist with Keck Medicine of USC; and Dr. Joshua Marcus, a neurosurgeon at Nuvance Health in Connecticut.

Thousands of Americans suffer traumatic brain injuries every year, but incidents like the ones that claimed Saget's life are rare. And although head traumas are "super common," Marcus said, "the overwhelming minority result in anything serious." Bumping the headboard as you're getting into bed shouldn't send you to the hospital. "It has to be a pretty traumatic fall," Kim-Tenser said. "It really has to be a pretty hard hit to the head," involving a hard impact on a hard surface. Giza agreed. "Hitting your head on the headboard is not going to create a lot of force," he said. By contrast, he said, "slipping in the bathroom and hitting your head on the side of the bathtub is going to have considerable force." The brain can also be injured in a less direct way, when a forceful event — a car wreck, for example — shoves it against the skull. A shearing injury is when "the brain is going one way, the force is going the other way," Marcus said. Then there are *contrecoup* injuries, when a force on one side of the head sends the brain into the skull on the other side.

The damage is caused when a blood vessel inside the skull ruptures, causing blood to pool between the brain and its surroundings. "The skull is a closed box, largely," Giza said, "so if you start filling up part of that space with bleeding, the rest of the stuff gets squished." Once you start squeezing the brain, it doesn't work very well. People can go into a coma or become paralyzed. And if the pressure is applied to the brain stem (the part near the spinal cord), it can interfere with a person's breathing and heartbeat, Giza said. Beyond that, he said, the pooled blood irritates the surface of the brain, potentially triggering seizures. Giza and Marcus said that some parts of the head are worse than others when it comes to brain injuries. Because the compartment around the brain stem is relatively small, Giza said, it takes less blood to cause problems there. And fracturing the temporal bone above the ear could sever an artery, causing blood to flow rapidly into the brain, Marcus said.

(Healey, J. (2022). *Los Angeles Times* より一部改変)

(全8の7)

- What helped identify Bob Saget's cause of death?
 - medical experts' speculations
 - traumatic brain injury
 - the three brain injury experts' diagnosis
 - medical autopsy
- What is the main idea of the first paragraph?
 - Brain damage is common and can be fatal.
 - Bob Saget was one of the greatest comedians in the US.
 - The comedian died instantly after hitting the head.
 - The most common cause of death in the US is suicide.
- According to the passage, which group would be less susceptible to death caused by TBI?
 - city dwellers
 - elderly citizens
 - disadvantaged people
 - military people
- Which of the following statements is NOT true about TBI?
 - Bob Saget belonged to an age group that are prone to serious TBI.
 - More than 80,000 TBI patients were admitted to a Florida hospital in 2006.
 - TBI claims the lives of more than 160 people per day.
 - TBI is a common injury, but some cases can be fatal.
- Which can be the best reason for the underlined symptom, "The brain can also be injured in a less direct way"?
 - Your brain is directly hit by a strong force.
 - The brain thumps against the counter part of the skull.
 - The force inside the skull is dispersed in every direction.
 - The damage is lessened by contrecoup injuries.
- According to the passage, what can be the main reason that falls could be very dangerous?
 - loss of blood as the consequence of a fall
 - seizure as the result of cerebral paralysis
 - reduced space in the skull due to bleeding
 - inflammation of vessels by fractured bones

(全8の8)

6

- 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。

店内の書棚の区画ごとに店主が異なる「シェア型書店」が各地に広がっている。本好きの人たちが気軽に来店し、自分のお薦めや読み終わった本を販売できる仕組みで、店主同士が交流を深めたり、商店街のにぎわいづくりに一役買ったりしている。

(谷(2022). 毎日新聞より一部改変)

- 次の英文は *Bulgarians Find Oldest European Town, a Salt Production Center* の見出しで始まる全4段落ある新聞記事から最初の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。

Bulgarian archaeologists have found what they believe to be the oldest town in Europe, a salt production center called Solnitsata near the modern-day city of Provadia. Although the 6-millennium-old town held only 350 people or so, it was apparently very wealthy because it supplied salt to much of what is now the Balkans. The town was functional more than 1,000 years before the beginning of Greek civilization.

(Maugh II, T.H. (2012). *Los Angeles Times* より一部改変)