# 英 語

(コミュニケーション英語 I・コミュニケーション英語 II・ コミュニケーション英語 II・英語表現 I・英語表現 II)

## 試験時間 120分

文学部, 教育学部, 法学部, 理学部, 医学部, 工学部, 情報融合学環

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- 2. 各解答紙の2箇所に受験番号を必ず記入しなさい。 なお、解答紙には、必要事項以外は記入してはいけません。
- 3. 試験開始後、この冊子又は解答紙に落丁・乱丁及び印刷の不鮮明な箇所などがあれば、手を挙げて監督者に知らせなさい。
- 4. この冊子の白紙と余白部分は、適宜下書きに使用してもかまいません。
- 5. 解答は、必ず解答紙の指定された場所に記入しなさい。
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Ι

If the idea that aging is a disease sounds strange to you, you're not alone. Physicians and researchers have been avoiding saying that for a long time. Aging, we've long been told, is simply the process of growing old. And growing old has long been seen as an inevitable part of life. We see aging, after all, in nearly everything around us and, in particular, the things around us that look anything like us. The cows and pigs in our farms age. The dogs and cats in our homes do, too. The birds in the sky. The fish in the sea. The trees in the forest. The cells in our petri dishes. It always ends the same way: dust to dust.

The connection between death and aging is so strong that the inevitability of the former governed our way of defining the latter. When European societies first began keeping public death certificates in the 1600s, aging was a respected cause of death. Descriptions such as "decrepitude" or "feebleness due to old age" were commonly accepted explanations for death. But according to the seventeenth-century English demographer John Graunt, who wrote Natural and Political Observations, so were "fright," "grief," and "vomiting."

As we've moved forward in time, we've moved away from blaming death on old age. No one dies anymore from "getting old." Over the past century, the Western medical community has come to believe not only that there is always a more immediate cause of death than aging but that it is imperative to identify that cause. In the past few decades, in fact, we've become rather fussy about this.

The World Health Organization's *International Classification of Diseases*, a list of illnesses, symptoms, and external causes of injury, was launched in 1893 with 161 headings. Today there are more than 14,000, and in most places where records of death are kept, doctors and public health officials use these codes to record both immediate and underlying causes of disability and death. That, in turn, helps medical leaders and policy makers around the globe make public health decisions. Broadly speaking, the more often a cause shows up on a death certificate, the more attention society gives to fighting it. This is why heart disease, type 2 diabetes, and dementia are major focuses of research and interventionary medical care, while aging is not, even though aging is the greatest cause of all those diseases.

Age is sometimes considered an underlying factor at the end of someone's life, but doctors never cite it as an immediate reason for death. Those who do run the risk of raising the ire of bureaucrats, who are prone to send the certificate back to the doctor for further information. Even worse, they are likely to endure the ridicule of their peers. David Gems, the deputy director of the Institute of Healthy Ageing at University College London and the same man who wrote the report from the Royal Society meeting on "the new science of

aging," told *Medical Daily* in 2015 that "the idea that people die of pure aging, without pathology, is nuts." But this misses the point. Separating aging from disease obscures a truth about how we reach the ends of our lives: though it's certainly important to know why someone fell from a cliff, it's equally important to know what brought that person to the cliff in the first place. Aging brings us to the cliff. Give any of us 100 years or so, and it brings us all there.

In 1825, the British actuary Benjamin Gompertz, a learned member of the Royal Society, tried to explain this upward limit with a "Law of Human Mortality," essentially a mathematical description of aging. He wrote, "It is possible that death may be the consequence of two generally co-existing causes; the one, chance, without previous disposition to death or deterioration; the other, a deterioration, or an increased inability to withstand destruction."

The first part of the law says that there is an internal clock that ticks away at random, like the chance a glass at a restaurant will break, with some glasses lasting far longer than most. The second part says that, as time passes, due to an unknown runaway process, humans experience an exponential increase in their probability of death. By adding these two together, Gompertz could accurately predict deaths due to aging: the number of people alive after 50 drops significantly, but there is a tail at the end where some "lucky" people remain alive beyond what you'd expect. His equations made his relatives, Sir Moses Montefiore and Nathan Mayer Rothschild, owners of the Alliance Insurance Company, a lot of money.

In the nineteenth century, British mortality rates were becoming amenable to simple mathematical modeling because they were increasingly avoiding not-from-aging deaths: childbirth, accidents, and infections. This increasingly revealed the underlying and exponential incidence of death due to internal clocks as being the same as it ever was. During those times, the probability of dying doubled every eight years, an equation that left very little room for survivors after the age of 100. That ceiling has generally held true ever since, even as the global average life expectancy jumped twenty years between 1960 and today. That's because all that doubling adds up quickly. So even though most people who live in developed nations can now feel confident that they will make it to 80, these days the chances that any of us will reach a century is just 3 in 100. Getting to 115 is a 1-in-100-million proposition. And reaching 130 is a mathematical improbability of the highest order. At least it is right now.

- (問1) 下線部(1)を日本語に直しなさい。
- (問 2) 下線部(2)のように著者が述べている理由を <u>50 字以内</u>の日本語でまとめなさい。(ただし, 句読点も字数に含む。)
- (問 3) 下線部(3)が指す内容を <u>35 字以内</u>の日本語でまとめなさい。(ただし、句読点も字数に含む。)
- (問 4) 下線部(4)の比喩を用いて著者が伝えたいことを、本文の内容に即して 50 字以内の日本語で説明しなさい。(ただし、句読点も字数に含む。)
- (問 5) 下線部(5)が示す単語をそれぞれ本文中から抜き出しなさい。
- (問 6) 下線部(6)の内容を、"That ceiling"の意味を明らかにしながら日本語で説明しなさい。

Read the following passage and answer Questions 1-7. The passage was written by Tom Kelley and his brother David, the founder of the consulting company IDEO and the Institute of Design at Stanford, also known as d.school.

Our fear of being judged is something we learn at a young age. But we don't start out with it. Most children are naturally daring. They explore new games, meet new people, try new things, and let their imaginations run wild.

In our family, that lack of fear manifested itself as a do-it-yourself attitude. If the washing machine broke, you didn't call a repair person. Instead you walked over to the washer, took it apart, and tried to fix it. That was part of the deal — in our house you were believed to be capable of fixing things.

Of course, sometimes home improvement jobs went awry. Once, we disassembled the family piano to see how it worked. Partway through the process, however, we realized that taking it apart. What was once a musical instrument became more like a series of art objects. The giant harp-like array of strings from that piano is still leaning up against one wall of our former bedroom in the basement, and the beautiful assembly of eighty-eight wooden hammers is mounted today on a wall in David's studio.

Artistic license was tolerated as well. You could take a perfectly good red bicycle you'd gotten for your birthday, sandblast it the next day, and repaint it neon green, just to make it more interesting — without a word of recrimination.

We didn't know as children that we were creative. We just knew that it was okay for us to try experiments that sometimes succeeded and sometimes failed. That we could keep creating, keep tinkering, and trust that something interesting would result if we just stuck with it.

David's best friend in the third grade, Brian, had a different experience with creativity.

One day, David and Brian were in art class, sitting at a table with half a dozen classmates. Brian was working on a sculpture, making a horse out of the clay that the teacher kept under the sink. Suddenly one of the girls saw what he was making, leaned over, and said to him, "That's terrible. That doesn't look anything like a horse." Brian's shoulders sank. Dejected, he wadded up the clay horse and threw it back in the bin. David never saw Brian attempt a creative project again.

How often does something like that happen in childhood? Whenever we mention lost-confidence stories like Brian's to business audiences, someone always comes up to us afterward to share a similar experience when a teacher or parent or peer shut them down.

Let's face it, kids can be cruel to one another. Sometimes, people remember a specific moment when they decided, as children, that they weren't creative. Rather than be judged, they simply withdrew. They stopped thinking of themselves as creative at all.

Author and researcher Brené Brown, who has interviewed scores of people about their experiences with shame, found that one third of them could recall a "creativity scar," a specific incident when they were told they weren't talented as artists, musicians, writers, singers.

When a child loses confidence in his or her creativity, the impact can be profound. People start to separate the world into those who are creative and those who are not. They come to see these categories as fixed, forgetting that they too once loved to draw and tell imaginative stories. Too often, they opt out of being creative.

The tendency to label ourselves as "noncreative" comes from more than just our fear of being judged. As schools cut funding for the arts and high-stakes testing becomes more pervasive, creativity itself is devalued, compared to traditional core subjects like math and science. Those subjects emphasize ways of thinking and problem solving that have a clear-cut single right answer, while many real-world twenty-first-century challenges require more open-minded approaches.

Well-meaning teachers and parents play a part when counseling young people toward conventional professions, sending the subtle message that occupations involving creativity are too risky and out of the mainstream. We both know what that feels like. Our guidance counselors told us when we were graduating from high school that we should stay near Akron, Ohio, and work for the local tire companies. They thought we were "dreamers" for setting our sights beyond the familiar. Had we taken their advice, there would be no IDEO or d.school today.

Education expert Sir Ken Robinson claims that traditional schooling destroys creativity. "We're now running national education systems where mistakes are the worst thing you can make," he says. "Education is the system that's supposed to develop our natural abilities and enable us to make our way in the world. Instead, it is stifling the individual talents and abilities of too many students and killing their motivation to learn."

Teachers, parents, business leaders, and role models of all kinds have the power either to support or suppress creative confidence in those around them. At the right age, a single cutting remark is sometimes enough to bring our creative pursuits to a standstill. Fortunately, many of us are resilient enough to try again.

Sir Ken told us a memorable story about talent that almost went to waste. He was born in Liverpool and made a discovery one day while talking to fellow Liverpudlian Paul McCartney. Apparently, the legendary singer-songwriter had not done especially well in his musical studies. His high school music teacher had neither given McCartney good marks nor

identified any particular musical talent in him.

George Harrison had the same teacher and had likewise failed to attract any positive attention in music class. "Let me get this straight," Sir Ken asked McCartney in amazement, "this teacher had half of the Beatles in his classes and didn't notice anything out of the ordinary!?" Lacking encouragement from the person best positioned to nurture their musical talents, McCartney and Harrison could have "played it safe" and gone to work in Liverpool's traditional manufacturing and shipping industries. But that "safe" route would have put them in the center of a downward economic spiral. Liverpool's heavy industry declined precipitously in the following two decades, leading to dizzying unemployment in their hometown and eventually to the closing of the school they had attended, the Liverpool Institute High School for Boys. Luckily for music fans, McCartney and his friends John, George, and Ringo found encouragement elsewhere. And of course, the Beatles became one of the most successful and beloved groups of all time.

Much later, having achieved fame and fortune and been knighted by the queen, Sir Paul McCartney felt the noblesse oblige to help others get the creative chance he nearly missed. After the Liverpool Institute closed, putting his music teacher — and all the other faculty and staff — out of a job, McCartney helped restore the dilapidated nineteenth-century school building from the ground up. Together with educator Mark Featherstone-Witty, he formed the Liverpool Institute for Performing Arts, a thriving creative environment that helps young people with emerging talent build practical skills in music, acting, and dance.

Note

The Beatles: a British rock band in the 1960s from Liverpool which consisted of Paul McCartney, John Lennon, George Harrison and Ringo Starr.

- 1. Which of the following is the closest in meaning to Underline (1)?
  - (A) adventurous
  - (B) innocent
  - (C) selfish
  - (D) timid
- 2. Put the following words in the right order to fit in Underline (2). You must use all the words.

[ as as back be fun it much putting together wouldn't ]

- 3. What happened to the piano of the writers' family?
  - (A) It was transformed into another musical instrument.
  - (B) Some of its parts became decorative items on the walls.
  - (C) They took it apart to create a work of art out of its parts.
  - (D) They tried to repair it on their own but ended up failing.
- 4. Brian lost faith in his creativity because
  - (A) he had no chance to learn in art class.
  - (B) his friends were much better at making sculptures.
  - (C) one of his classmates criticized his clay animal.
  - (D) the art teacher gave him a bad grade.
- 5. The writers suggest that a loss of confidence in creativity
  - (A) generally occurs as a result of repeated negative feedback from peers.
  - (B) is often accompanied by poor skills in core subjects like math and science.
  - (C) often leads people to categorize themselves as lacking in creativity.
  - (D) tends to happen after high school when students enter the workforce.
- 6. Which of the following is the closest in meaning to Underline (3)?
  - (A) teachers and parents who have deep sympathy
  - (B) teachers and parents who have good intentions
  - (C) teachers and parents who have high levels of education
  - (D) teachers and parents who have open-minded attitudes

- 7. Select TWO statements that are true about the passage.
  - (A) According to Robinson, "mistakes are the worst thing you can make" because it means you are not using your natural ability to solve problems.
  - (B) Although McCartney himself never received encouragement as a student, he later established a school in his hometown to promote the arts.
  - (C) "Creativity scars" generally emerge in adulthood when a specific event makes people realize they lack artistic talent.
  - (D) Educational systems are changing to allow students to use their creativity to solve problems across subject areas.
  - (E) The music teacher who taught Paul McCartney and George Harrison recommended that they work in traditional industries.
  - (F) The natural creativity of young children cannot be developed unless they are allowed to fail sometimes.



Respond to the topic below in 80-100 words. Count the number of words and put the number in the box provided. Do not count punctuation such as periods and commas as words.

### Working styles

Because of the COVID-19 pandemic, working styles have changed significantly. If you could choose your working style after graduation from university, would you prefer commuting to an office every day, working remotely from home, or a combination of the two? Explain your preference.



▼ 次の英文は、気候変動に関する架空のラジオ番組のインタビューである。文中の( 1 )~ ( 20 )に入る最も適切な語を<語群>から選んで記入しなさい。また、動詞は必要に応じて適切な形に変えなさい。

#### <語群>

| aesthetic | around   | burn       | combat      | discriminate |
|-----------|----------|------------|-------------|--------------|
| effort    | extent   | fail       | farm        | frequent     |
| go        | happen   | households | informative | install      |
| lead      | majority | mean       | near        | officials    |
| option    | pay      | shut       | voice       | wait         |

Miranda: Welcome to another hour of "Free Talk." I'm Miranda Williams, and our guest today is Professor Kyle Morgan, an expert on climate change. Professor Morgan, welcome to the show.

Kyle: Thanks, but please call me Kyle. I'm glad to be here.

Miranda: Well, Kyle, climate change is all around us, isn't it? Rising sea levels, hotter summers, floods and droughts. Is there any way out of this? Or has the situation ( 1 ) too far?

Kyle: It's true we're at a critical point, but it's not too late. There are solutions, but we need to act now. And as it turns out, there's a lot we can do as individuals to( 2 ) climate change.

Miranda: Oh? What do you mean?

Kyle: The single biggest way you can make an impact is by speaking out. Talk to family and friends, and ( 3 ) our concerns on social media. Better yet, send messages directly to your elected ( 4 ), and let them know you want new laws enacted that will limit carbon emissions, and slow the impact of climate change.

Miranda: Those are good suggestions, but it takes a long time to pass new laws, doesn't it?

Can we really afford to (5 )?

Kyle: Well, there are lots of things we can do in our daily lives to limit the effects of climate change by reducing energy consumption. Think, for example, about daily water usage. It's relatively easy to reduce water waste by taking shorter showers, or simply (6) off the tap while brushing your teeth. It takes a lot of energy to pump, heat, and treat the water you use, so saving water reduces carbon pollution. If you live in your own home, you could also consider (7) water-efficient appliances. These can save enormous amounts of electricity, and easily (8) for themselves over time.

Miranda: I see. What you're saying is that simple changes in our everyday lives can really make a difference. Besides reducing water usage, do you have any other tips?

Kyle: Food waste is another huge problem. Most people assume that the (9) of food waste comes from unsold food in restaurants or supermarkets. But the reality is that over half of food waste comes from (10).

Miranda: Hmm, that's surprising. But how exactly is food waste connected to energy consumption?

Kyle: Every step of the process of getting food from the (11) to your dining table
— including growing, processing, packaging and shipping — requires energy. By cutting down on food waste, we can save a lot of energy.

Miranda: Ah, I get it now. So, what advice do you have for people who want to reduce food waste in their home?

Kyle: I'd say the first step is to focus on actually eating the food that you buy. In other words, plan your meals, and then buy only what you need when you go to the supermarket. It's also a good idea to avoid going to the supermarket when you're hungry, as this can ( 12 ) to impulse buying. If you do this, you'll probably save money on your food bill and help the environment at the same time.

Miranda: That's excellent advice. With the cost of food soaring, who doesn't want to save money? Still, I suppose a certain amount of food waste is unavoidable.

Kyle: You're right to some (13). But if you're really serious about reducing food waste, you can collect the food scraps or leftovers you can't eat, and put them into a compost bin. This reduces carbon emissions, and also improves the quality of the soil.

Miranda: That might take a bit more ( 14 ), but it's a great idea. Any other aspects of our daily life where we can reduce energy consumption?

Kyle: The most obvious one we haven't mentioned yet is automobiles. Fortunately, ecofriendly cars, (15) hybrids or fully electric cars, are slowly becoming the norm.

Next time you're ready to buy a new car, check out the fuel efficiency of the model
you're interested in. You may find that paying a little more for better fuel
efficiency will pay off in the long run. But even better, think about walking or
bicycling if you live (16) enough to your school or place of work. Planning
your errands so that you don't have to drive as much is another way to reduce fuel
consumption.

Miranda: I've heard that compared to cars, airplanes are actually the biggest source of carbon pollution. Is that true?

Kyle: Yes it is, so less (17) flying is another way that we can make a difference. Many of us have gotten into the habit of regularly taking flights for annual vacations, but there may be lots of interesting places closer to home. Trains are not as bad as planes, so if that's a possible (18), then do that. If you must fly, there are still things you can do. Reducing the luggage you bring with you is one way, because heavier baggage means more fuel is being (19).

Miranda: We're about out of time, Kyle, but this has been a very ( 20 ) discussion. Please check our website for more advice from Kyle about reducing energy usage in your daily life.

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| Ι | David Sinclair with Matthew D. LaPlante. | Lifespan: Why | , We Age — and | Why | We Don't |
|---|--|---------------|----------------|-----|----------|
|   | Have To. 2019. HarperCollins. (一部変更)     |               |                |     |          |

Tom Kelley and David Kelley. Creative Confidence: Unleashing the Creative Potential Within Us All. 2014. William Collins. (一部変更)

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