

令和 3 年度入学試験問題（一般入試）

英 語

注 意

1. 問題冊子は、指示があるまで開かないこと。
2. 問題冊子は 6 ページ、解答紙は 2 枚である。「始め」の合図があったら、それぞれページ数および枚数を確認すること。
3. 解答開始前に、試験監督者の指示に従って、すべての解答紙それぞれ 2 ヲ所に受験番号を記入すること。
4. 解答は、黒色鉛筆（シャープペンシルも可）を使用し、すべて所定の欄に記入すること。欄外および裏面には記入しないこと。
5. 試験終了後、監督者の指示に従って、解答紙の順番をそろえること。
6. 下書き等は、問題冊子の余白を利用すること。
7. 解答紙は持ち帰らないこと。

〔1〕 次の英文を読んで、文中の（ア）～（シ）に入れるのに最も適当な英語一語をそれぞれ書きなさい。

Considering how widespread it is and how unpleasant it can be, we know surprisingly little about pain. Pain is not a thing — it's a perception. The same injury can cause vastly different levels of pain in different people, depending （ア） a number of factors, including how busy they are and what mood they are in. If you stub*¹ your toe during a relaxed Sunday afternoon, you might feel a lot of pain. If you do the same thing as you are running to stop a small child （イ） walking in front of a bus, you might not notice the pain at all.

Fortunately, because pain is a （ウ） — a feeling — rather than something more concrete, music can help to minimize it. Music can reduce stress, relax you, improve your mood, and focus your attention — all factors that can help reduce the （エ） you feel. In addition, the fact that your brain is having to process the music is a distractor*² — like seeing a child in danger — which interferes （オ） the “Bloody hell! That hurts!” signal. Music has been found to be very useful in dealing with temporary pain （カ） as dental treatment and headaches, particularly if the patient chooses the music and controls （キ） loud it is. Interestingly, the music works best if the patient has been told （ク） it will reduce the pain. If patients believe that they have some control over a method of pain reduction, the belief itself helps to reduce the pain.

One study of the effects of music on pain involved asking volunteers to keep their hands in very cold water for as （ケ） as they could stand. Participants who chose their own music could keep their hands in the cold water for （コ） than people who listened to white noise or random relaxation music. Once more it seems that choosing the music made the volunteers feel more in control of the situation and this helped them cope with the pain for a longer time. Women who performed this test after choosing their own music not （サ） coped longer with the pain but also felt that the pain was less intense; （シ） coped longer but felt the same intensity.

【Adapted from *Why You Love Music: From Mozart to Metallica — The Emotional Power of Beautiful Sounds*, by John Powell, Little Brown, 2016, pp. 76-77】

〔注〕 *1 stub : ぶつける

*2 distractor : 気を散らすもの

[2] 次の英文を読んで設問に答えなさい。

Are animals capable of having fun? That is to say, are they capable of doing things that have no particular purpose other than to bring them pleasure and happiness? I think that's an important question, because the answer helps us decide whether animals experience positive feelings only when they perform tasks that promote the survival of the species. If that were the case, then pleasure and happiness would be purely the result of instincts that ensure that certain behaviors are engaged in and rewarded. In contrast, just by remembering happy experiences, humans can feel the emotions that went with them and enjoy them over and over again. Free-time fun belongs here, such as a holiday by the sea or winter sports in the mountains. Might ⁽¹⁾this be the essential thing that makes us different from animals? But then an Internet video showing a tobogganing*¹ crow sliding down the roof of a house comes to mind. The crow has found a lid*² from a plastic container. It carries it up to the highest part of the roof, places it on the slope and then jumps onto it to slide down. No sooner does the bird reach the bottom than it goes back up for its next ride. The point? Apparently none. The fun factor? Probably the same as when we jump onto the wooden or plastic object of our choice and slide down a hill in the snow.

Why would crows use energy on ⁽²⁾such an activity that has no meaning? After all, the tough competition in evolution demands that creatures eliminate all activities that do not have any benefit, and any animal that does not meet this demand will not survive. And yet it's been a long time since we humans have paid any attention to this apparently absolute rule. At least in wealthier countries, we have energy to spare and we can afford to use it to enjoy ourselves. Why should it be any different for an intelligent bird that has set aside sufficient food for the winter and can devote some of its energy to fun and games? Clearly, crows, too, can convert surplus resources into simple fun and create happy feelings whenever they want.

So what about dogs and cats? Anyone who lives with these animals can tell stories about how they love to play. Our dog Maxi liked to play tag*³ with me in our yard. Because she knew she could run much faster than I could, she always gave me a chance to catch her so that the game didn't get boring. She'd run big circles around me, every once in a while running quickly towards me. Then, just before I caught her, she'd step aside and I'd miss. You could tell just by looking at her how this game delighted her. I really enjoy looking back to that time, and yet I'd rather find other examples as evidence of play with no useful purpose at all — in a positive meaning — because Maxi probably used this game to make our relationship stronger. And it's true that any fun activity within a group can act as social glue and therefore serve a purpose in its evolution. Energy invested in unity promotes groups that can resist threats from the outside.

So let's take another look at crows. There are lots of reports of crows that tease*⁴ dogs. They stalk*⁵ them from behind and bite them on the tail. Of course the dog spins around too slowly to catch the bird, which soon starts the game all over again. This is not a case of creating social unity, and it's not a case of the bird practicing some survival skill, either. After all, escaping from spinning dogs is not a necessary survival

behavior. No, what's going on here seems to be something completely different. ⁽³⁾The crow can clearly put itself in the dog's place and realize that the dog will always be too slow and will therefore get annoyed. And that's what makes it so much fun to tease it over and over again, happily anticipating its reaction. Lots of crows enjoy doing this, as is evident in any number of Internet videos.

【Adapted from *The Inner Life of Animals: Surprising Observations of a Hidden World*, by Peter Wohlleben, Vintage: Penguin Random House UK, 2018, pp. 101-103】

[注] *1 tobogganing : トボガン (小型のそり) に乗っている

*2 lid : ふた

*3 tag : 鬼ごっこ

*4 tease : からかう

*5 stalk : こっそり近づく

[設問]

1. 下線部(1)が示していることを、本文の内容に沿って 60 字以内の日本語で書きなさい。
2. 下線部(2)の内容について、本文の内容に沿って 60 字程度の日本語で書きなさい。
3. 下線部(3)を日本語に訳しなさい。
4. 本文の内容に関する次の文(1)~(5)を読み、正しいものには○、間違っているものには×を、それぞれ記入しなさい。
 - (1) Crows might enjoy sliding down a roof in the same way that humans enjoy skiing.
 - (2) Basically, activities with no survival benefit to animals are assumed to disappear during their evolution.
 - (3) Crows do not have time for fun activities in winter because they must use all their energy to find food for survival.
 - (4) The author's dog understood that she could move more quickly than him when they played tag.
 - (5) Crows tease dogs as a means of practicing survival skills.

[3] 次の英文を読んで設問に答えなさい。

Growing old is a relatively recent phenomenon. Until the last century or two, the average life span was less than 30 years. ⁽¹⁾There is very little historical information about the aging process, and because so few people had the opportunity to achieve their full aging potential, we are just now learning what our potential life spans are. Prior to the agricultural revolution of 10,000 or so years ago, life was usually cut short by predation,*¹ injury, or starvation. The emergence of agriculture led to the formation of villages and cities; with people settling in close proximity,*² we saw the rise and spread of infectious diseases, which continued to inhibit*³ average life spans. It wasn't until the twentieth century that average life expectancy began to rise appreciably, thanks to the medical successes curing infectious diseases, the widespread availability of food, and fewer hazards of daily life in civilized society. In fact, in the twentieth century alone, we have added approximately 30 years to the average life span, a near doubling over the previous millennia.*⁴

A century ago there were only a handful of centenarians*⁵ on earth. By 1950 their numbers were estimated to be a few thousand. Today there are thought to be 340,000 centenarians worldwide, and it is estimated that that number will increase to 6 million by 2050. The highest concentrations of centenarians are projected to be in the United States and Japan. In 2009 there were approximately 100,000 in the United States and nearly 40,000 in Japan, but by mid-century those numbers are expected to grow to at least 600,000 in the United States and a full million in Japan, making centenarians the fastest-growing segment*⁶ of society, more than 20 times the overall rate of total population growth.

These impressive statistics emphasize the possibility of 100 as a reasonable objective, a longevity*⁷ beacon*⁸ that is demonstrably achievable. And yet we find ourselves in an era when the upward progression of expected life span is seriously threatened by an epidemic*⁹ of lifestyle-based negative factors. Obesity*¹⁰ and diabetes*¹¹ are the dangers of our times, a peculiar regression*¹² in a century of generally improving public health and longevity. We are increasingly becoming a bifurcated*¹³ society, with one segment focused on health and nutrition, and the other shifting our public health statistics in the negative direction. Probably the greatest challenge in public health policy today is to provide the education and motivation for the unhealthy to turn their lives around and adopt healthier — and hence more productive — lifestyles.

(中略)

It is as natural as breathing to want to extend life to its maximum limit. And yet who wants to live with sickness, weakness, and the loss of independence? Who wants to spend their last years — or decades — bedridden and hooked up to machines? It should be obvious that longevity and health are flip sides of the same coin. Longevity without health is not a desirable outcome for anyone. In fact it's not even an option. It is the convergence*¹⁴ of the aging process and the quality of our health that determines our life span.

⁽²⁾An extensive study by a Danish research group, covering 30 developed countries, now projects that, of the babies born in these countries today, fully half should live to 100 or more. More importantly, these

people are expected to encounter less disability*¹⁵ and fewer functional limitations as they age, a consequence of presumed healthier lifestyles. The half that will not reach 100 will likely continue the other notable trend of our times, the increasing rate of obesity and diabetes that is pulling longevity statistics in the other direction.

Who wouldn't want to live to 100 or more, to have the longest possible life span? Not everyone, apparently. According to a survey by the Pew Research Group, only 8 percent of Americans actually expressed a desire to live to 100. The reason is that most of us still associate that age with sickness and a very low quality of life. The image presented by a 100-year-old person is invariably one dominated by the things that a person can no longer do, of loss of independent living and degraded function. ⁽³⁾What is desirable about living so long if you can't do the things that seemed to make life worth living in the first place?

We believe that this view of late life is demonstrably wrong. One's later years are not fated to catastrophic*¹⁶ decline and decrepitude,*¹⁷ and we can now assert with the support of solid science that a great deal of the aging process is within our personal control.

【Adapted from *The Roadmap to 100: The Breakthrough Science of Living a Long and Healthy Life*, by Walter M. Bortz II, MD and Randall Stickrod, Palgrave Macmillan, 2010, pp. 7-11】

- 〔注〕
- | | |
|---------------------------|------------------------------|
| *1 predation : 略奪 | *2 proximity : 近いこと, 近接 |
| *3 inhibit : 抑制する | *4 millennium : 1000年間 |
| *5 centenarian : 100歳以上の人 | *6 segment : 区分, 階層 |
| *7 longevity : 長生き, 長寿 | *8 beacon : 指針となるもの |
| *9 epidemic : 流行, 蔓延 | *10 obesity : 肥満 |
| *11 diabetes : 糖尿病 | *12 regression : 後戻り |
| *13 bifurcated : 二分化した | *14 convergence : 一致, 集合 |
| *15 disability : 身体障害 | *16 catastrophic : 壊滅的な, 悲惨な |
| *17 decrepitude : 老衰 | |

〔設問〕

1. 下線部(1)を日本語に訳しなさい。
2. 下線部(2)において予測されていることを3点, それぞれ本文の内容に沿って日本語で書きなさい。
3. 下線部(3)を日本語に訳しなさい。
4. 本文の内容に関する次の文(1)~(5)を読み, 正しいものには○, 間違っているものには×

を、それぞれ記入しなさい。

- (1) Starvation was a common cause of death before the agricultural revolution.
- (2) In 2050 there will probably be one million people over the age of 100 in Japan.
- (3) Thanks to our keen interest in health and nutrition, lifestyle-based diseases are no longer a risk to longevity.
- (4) Most Americans want to live to be 100 years old.
- (5) The authors assert that all centenarians will face sickness and a very low quality of life.

〔4〕 (英作文)

2020年7月から、日本政府は全国のお店でレジ袋の有料化政策を開始しましたが、この政策についてどう思いますか。あなたの意見を100語程度の英語で書きなさい。

