

令和6年度
一般選抜（前期）

11時30分～13時00分

英語

問題冊子 1～8頁
解答用紙 1～2頁

注意事項

- 試験開始の合図〔チャイム〕があるまで、この注意をよく読むこと。
- 試験開始の合図〔チャイム〕があるまで、問題冊子は表紙を上に、解答用紙は裏面を上に置き、問題冊子は開かないこと。
- 試験開始の合図〔チャイム〕の後に問題冊子ならびに解答用紙の全ページの所定の欄に受験番号と氏名を記入すること。
- 解答はかならず定められた解答用紙を用い、はっきり読みやすく記入すること。
また解答欄以外には何も書かないこと。
- 試験開始60分以内および試験終了前10分間は、途中退場を認めない。
- 途中退場、質問、トイレ、体調不良等で用件がある場合は、举手のうえ監督者の指示に従うこと。
- 問題冊子に、落丁や乱丁があるときは、举手のうえ交換を求める。
- 試験終了の合図〔チャイム〕があったときは、ただちに筆記用具を置くこと。
- 試験終了の合図〔チャイム〕の後は、解答用紙は裏返しにして、通路側に置くこと。
なお、途中退場の場合は解答用紙を裏返しにして、問題冊子の上に置くこと。
- 問題冊子は持ち帰ること。なお、途中退場する場合は問題冊子を持ち帰れない。
- その他、監督者の指示に従うこと。

受験番号		氏名	
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1

英文を読み問題に答えなさい。指示がある場合以外は日本語で答えること。

① If you were walking through a dark forest in ancient Japan, you might hope to run into an okuri-ōkami, a wolf that would escort you safely to your destination. This creature of folklore may be based on the Japanese wolf, a border collie-sized animal with short legs and stubby ears that lived in Japan for thousands of years until humans wiped it out in the early 20th century. Now, scientists studying ancient DNA from this wolf's bones say they may have solved the long-standing mystery of where (A)it came from: a vanished population of gray wolves in East Asia that also gave rise to modern dogs.

② “It's a very carefully done study,” says Peter Savolainen, a geneticist at the Royal Institute of Technology in Stockholm, who was not involved with the study. The research, he says, adds interesting evidence to the idea of where dogs arose from.

③ All of today's dogs likely descend from a single population of gray wolves. But exactly where and when those wolves lived has long been a source of contentious debate. Part of the problem is that although the species still exists, that original population has likely vanished, eliminating genetic clues about the origin of dogs.

④ Let's go back to the story of the Japanese wolf. Described by some as one of the greatest mysteries in the history of Japanese zoology, the animal's origins are unclear, as is the (1) it took to reach Japan. In 2021, a genetic analysis of the bones from a single Japanese wolf revealed it was closely related to a bloodline of Siberian wolves that had long (2) extinct. Recent evidence also suggests dogs may have arisen in Siberia. Might Japanese wolves and dogs share more than just geography?

⑤ To find out, (B)Yohei Terai, an evolutionary biologist at the Graduate University for Advanced Studies in Hayama, Japan, and colleagues extracted and analyzed the complete genetic makeup* of nine Japanese wolves. The researchers also analyzed the genomes of 11 Japanese dogs, including popular breeds like the Shiba inus. They then compared all the genetic information with the available genomes of a variety of animals in the dog family, such as foxes, coyotes, dingoes, various wolves, and modern dogs from around the world, and then found that the Japanese wolves stood out as their own group, separate from the other species. “They are distinct from any other wolf or dog,” Terai says.

⑥ Yet when Terai and his colleagues constructed evolutionary trees, they found that the branch containing the Japanese wolf bloodline lay closer to that of dogs than to any other animal. “It's a sister relationship,” Terai says. “If true, this is very important because

it's the first time we've seen a wolf population that's close to (3)," says Laurent Frantz, an evolutionary geneticist at the Ludwig Maximilian University of Munich, who was not involved with the work.

⑦ Most importantly, the data suggest dogs and Japanese wolves share the same ancestor: a vanished population of gray wolves that lived somewhere in East Asia, given the likely routes of both Japanese wolves and early dogs. That supports two conflicting theories about (c)canine domestication. Savolainen has long argued that dogs arose in Southeast Asia, whereas Frantz and his colleagues have suggested northeastern Siberia. The new study doesn't provide enough data to say who is right, Savolainen says, but it does argue against other proposed regions of dog domestication, including Western Europe or the Middle East.

⑧ However, not all dogs have a genetic overlap with the Japanese wolf. Terai and his colleagues found that eastern dogs—a group that includes relatively ancient dogs like the dingo and New Guinea singing dog and other Japanese breeds—shared five percent of their DNA (4) the Japanese wolves. Western dogs, like Labrador retrievers and German shepherds, shared much less genetic material. The team suspects that Japanese wolves may have bred with dogs moving east, and later, those dogs bred with western dogs, leaving the Japanese wolves' genetic characteristics.

⑨ (5) the new findings, both Savolainen and Frantz argue more data will be needed to say for sure that dogs and Japanese wolves share the same direct ancestor—or whether another population of wolves gave rise to (D)man's oldest friend. "This is a really good step forward," Frantz says. "Wolves are the key to understanding dogs, so it's going to be really exciting to see where this goes."

注 *complete genetic makeup: genome; the particular type and arrangement of genes that each organism has

[1] 空欄(1)～(5)に入る最も適切なものを選びなさい。

- (1) (a) channel (b) means (c) route (d) street
- (2) (a) considered as (b) been considered (c) being considered (d) considered
- (3) (a) dogs (b) its own group (c) Japanese wolf (d) other species
- (4) (a) at (b) in (c) to (d) with
- (5) (a) Although (b) Despite (c) Even if (d) Nevertheless

[2] 下線部(A)が指し示すものを本文から英語で抜き出しなさい。

[3] パラグラフ⑤から、下線部(B)を中心とする研究者らが行った研究について、以下を答えなさい。

- (a) 遺伝子解析の対象となったもの
- (b) (a)の解析後に行なったこと
- (c) (b)から明らかになったこと

[4] 下線部(C)イヌ科動物の家畜化について、どのような議論があり、テライの研究はどう関わっているか、100字以内で説明しなさい。

[5] 下線部(D)は具体的に何のことか、本文から英語を抜き出しなさい。

2

Read the following passage and answer the questions.

COVID-19 is just one example of a disease that has jumped from a wild animal to people. In hopes of preventing future outbreaks, scientists are working to understand what led to the jump, also known as a spillover event. A research group working in Australia thinks it may have one answer: (1)

All animals carry germs. Some viruses don't harm the animals in which they are typically found. That's because the host species has encountered this virus so often that its immune system has evolved a way to keep the germ (2a). But if this virus later finds its way into a new species, it may (2b) serious disease. "It's helpful to be able to understand why, when and where viruses can pass, or spill over, from wildlife species to humans or other animals," says researcher Alison Peel. It's not easy to track when viruses jump from their wild host to a new one, but doing so can reveal the conditions that allow spillovers to happen.

Peel studies Hendra virus, which often is found in fruit-eating bats. This virus sometimes spills over into horses. In three out of four such cases, the horse will die. The virus also can jump from horses to people, where it's deadly more than half the time. Peel and other researchers wanted to understand what causes the virus to spill over, so they might help prevent future outbreaks.

From 1996 to 2020, the research team tracked where bats spent their time. They also noted (3) at which spillovers occurred, such as climate and habitat. And since these bats eat nectar, they recorded the location of blooming flowers. For the first six years, there were no spillover events. But starting in 2003, they noticed the bats' ecosystem was changing. Soon after, spillovers started to show up. The researchers linked these events to periods when the bats couldn't find enough food.

4

But some spillovers happened even during non-El Niño years. The researchers suspect this might be due to changes in tree cover. [A] Over the course of the study, large sections of forest were cut down for farming and housing. [B] This reduced the number of trees that flower in winter, such as Eucalyptus. [C] Just as they did after El Niño years, they now spent more time near farms in search of food. [D] It was after this shift that spillover

events occurred.

Finding enough food can help prevent spillovers for two reasons, says team member Raina Plowright. “If food is in native forests and it is abundant, then animals are likely to be in those forests.” That keeps them away from horses and people who might otherwise be exposed to the virus. Second, good nutrition boosts the immune system, which “requires a lot of energy,” Plowright notes. “We think that the animals can’t keep viruses in check as easily if they are hungry.”

(6) Australia is just one place where people are destroying natural areas that provide essential habitat for wildlife. As people intrude into these areas, animals may change their behavior to survive in ways we don’t expect Peel says. (7), they may carry more of those germs.

[1] Which choice fits gap (1) the best?

- (a) Develop new vaccines for animals.
- (b) Allow wild animals and people to live together.
- (c) Keep wildlife well-fed.
- (d) Stop climate change.

[2] Choose the most appropriate pair for (2a) and (2b).

	(2a)	(2b)
(a)	under control	prevent
(b)	available	cause
(c)	in check	trigger
(d)	growing	result in
(e)	give up	put a stop to

[3] Which choice fits gap (3) the best?

- (a) typical places
- (b) unusual characteristics of the bats
- (c) travel patterns of animals in the areas
- (d) features of the locations

[4] Arrange the following sentences in the correct order to make a paragraph. One sentence has already been given in its right place.

- (a) Hungry bats will then leave their forests in search of food.
- (b) This climate event causes Australia to become hotter and drier.
- (c) And they may stay near these farms until the following winter.
- (d) This happened in years that followed strong El Niño events.
- (e) Trees that normally flower in spring may now fail to do so.
- (f) Some may wind up near farms where they can infect horses.

()—()—(e)—()—()—()

[5] Choose the best place [A], [B], [C] or [D] for the following sentence.

Without their main food source, hungry bats shifted their behavior.

[6] What can we understand from the underlined part (6)?

- (a) Ecosystems cannot provide natural places for animals to live anywhere.
- (b) Human activity is only threatening the survival of wildlife in Australia.
- (c) Several places in Australia are causing similar destruction of habitat.
- (d) Wildlife habitat is being destroyed in places other than Australia as well.

[7] Which choice fits gap (7) the best?

- (a) When animals have healthy immune systems
- (b) Then they begin to reproduce more rapidly
- (c) If these animals struggle with hunger
- (d) Whether they live or die

[8] Read the following statements and identify 2 true statements based on the entire passage.

- (a) Tracing the pathway of viruses as they move from species to species is easy.
- (b) Spillover events do not seem to happen when food is abundant.
- (c) In winter, Australian fruit-eating bats primarily feed on Eucalyptus blossoms.
- (d) When the Hendra virus jumped from bats to people, people died in seventy-five percent of the cases.
- (e) Similar changes in bat behavior were observed in spillover events during non-El Niño years and after El Niño years.

3 Answer the following questions.

[1] Choose the most appropriate expression for the given situation in terms of grammar, logic and context.

(1) You just arrived at the newly-opened ice cream shop and see many people lining up. You are not sure if a girl standing in front of you also wants to buy some or not. What would you ask?

- (a) Excuse me, are you in the queue?
- (b) Hello, are you a customer who stands for ice cream?
- (c) Hey, can I stand in line after you line?
- (d) Sorry, are you coming for shopping for ice cream?

(2) You needed your high school ID card to take an examination but forgot to bring it. What would you ask the examiner?

I'm very sorry, but I forgot to bring my ID card. _____

- (a) Could you tell me what I should do?
- (b) What do I make up for it?
- (c) Will I need a procedure?
- (d) Will you tell me advice for that?

(3) Your mother asked you to wash the dishes after dinner. After a while, she saw all the dishes still sitting in the sink. You wanted to make an excuse for that. What would you say?

- (a) I meant to help you for the dishes clean until a phone disturbed me.
- (b) I was about to cleaning the dishes, when I noticed my phone ring.
- (c) I was going to do the dishes, but I got a phone call.
- (d) I would have been doing the dishes then my phone called me.

(4) Your mother worries about you not studying anything over the weekend and asks if your teachers have assigned some tasks for next week's classes. What would you say?

- (a) Homework is none by the next classes.
- (b) I have any homework doing over the weekend.
- (c) I have no homework to do this weekend.
- (d) There is nothing homework for next week.

[2] Here is an email from a baseball team manager to the team members. Read the email and choose the most appropriate option that fits in the blank.

Dear All,

I hope this message finds you well.

As you may be aware, a typhoon is forecasted to approach the area in the coming days. Your safety is most important, so I've changed the camp dates to keep everyone safe.

New Training Camp Dates: November 11, 12

Departure Time: Nov. 11th, 8:30

Return Time: Nov. 12th, 16:30

If you have any questions, please do not hesitate to contact me.

Thank you for your understanding.

Best regards,

Bill White

ABC Baseball Team Manager

Tel: 111-2222-3333

- (a) I am excited to tell you about the new safety policy for our team members.
- (b) I am happy to announce the new date for our training camp despite the typhoon.
- (c) I am very sorry for the unfortunate circumstances of not having the training camp this year.
- (d) I regret to inform you that our training camp has been rescheduled due to a typhoon.

以 上