

日本獣医生命科学大学

令和7年度 一般選抜（第3回）入学試験問題（全学科）

受験番号

外国語

(100点)

注意事項

- 試験開始の合図があるまで、この問題冊子は開いてはいけない。
試験時間は11時00分から12時00分までである。
- 解答に先だち、問題冊子および解答用紙の印刷不鮮明、ページの落丁・乱丁等の有無を確認すること。
- 解答に先だち、問題冊子および解答用紙の所定の欄に受験番号を正しく記入すること。
 - ① 解答用マークシートと解答用紙の2枚を使用すること。
 - ② 解答用マークシートへの受験番号の記入については、受験番号枠に数字を記入しその下のマーク欄をマークすること。
 - ③ マークは、解答用マークシートの記入方法に従って正しく記入すること。
- この問題冊子の余白等は適宜利用してよいが、どのページも切り離さないこと。
- この問題冊子は回収する。

英 語

I 次の英文を読み、設問に答えなさい。

For millions of years, mammoths lumbered^{注1} across Europe, Asia and North America. Starting roughly 15,000 years ago, the giant animals began to (a) from their vast range until they survived on only a few islands.

Eventually they disappeared from those refuges, too, with one exception: Wrangel Island^{注2}, a 7,600-square-kilometer (2,900-square-mile) land mass north of the coast of Siberia. There, mammoths held on for thousands of years — they were still alive when the Great Pyramids were built in Egypt.

When the Wrangel Island mammoths disappeared 4,000 years ago, mammoths became extinct for (b).

For two decades, Love Dalén, a geneticist^{注3} at Stockholm University, and his colleagues have been extracting bits of DNA from fossils on Wrangel Island. In recent years, they^(ア) have gathered entire mammoth genomes^{注4}. Last month, they published a reconstruction of the genetic history of these enigmatic^{注5} animals.

The scientists concluded that the island's population was founded about 10,000 years ago by a tiny herd (c) up of fewer than 10 animals. The colony survived for 6,000 years, but the mammoths suffered from a host of genetic disorders.

Oliver Ryder, the director of conservation genetics^{注6} at San Diego Zoo Wildlife Alliance^{注7}, said that the study held important lessons for trying to save species from extinction today. It shows that inbreeding^{注8} could cause long-term harm.

“The mammoth study allows one to examine that process^(A) over thousands of years,” said Dr. Ryder, who was not involved in the new study. “We don't have data like that for the species we are trying to save now.”

Dr. Dalén and his colleagues examined the genomes of 14 mammoths that lived on Wrangel Island from 9,210 years to 4,333 years ago. The researchers compared the DNA from the Wrangel Island mammoths with seven genomes from mammoths that lived on the Siberian mainland up to 12,158 years ago.

The genome of any animal contains a tremendous amount of (d) about the population it belonged to. In big populations, there is a lot of genetic diversity. As a result, an animal will inherit different versions of many of its genes from its parents. In a small population, animals will become inbred^{注9}, inheriting identical copies of many genes.

The oldest Wrangel Island fossils contain identical versions of many genes. Dr. Dalén and his

colleagues concluded that the island was founded by a remarkably tiny population of mammoths.

Before about 10,000 years ago, Wrangel Island was a mountainous region on the mainland of Siberia. Few mammoths spent time there, preferring lower regions where more (e) plants grew.

But at the end of the ice age, melting glaciers submerged^{注10} the northern margin of Siberia. “There was one small herd of mammoths that happened to be on Wrangel Island when it was cut off from the mainland,” Dr. Dalén said.

The mammoths on the mainland faced significant (f) to their survival. Humans hunted them down, while the changing climate wiped out much of their grassland habitat, turning it to tundra^{注11}. But the few mammoths stranded on Wrangel Island enjoyed a tremendous stroke of good luck. The island was free of people and other predators^{注12}, and they faced no (g) from other grazing mammals^{注13}.

What’s more, the climate on Wrangel Island turned it into an ecological time capsule, where the mammoths could still enjoy a diversity of ice age plants.

“Wrangel Island was a golden place to live,” Dr. Dalén said.

He and his colleagues found that the population on Wrangel Island (h) from fewer than 10 mammoths to about 200. That was probably the maximum number of mammoths the island’s plant life could support.

But life was (i) from perfect for the Wrangel mammoths. The few animals that founded the island had very little genetic diversity, and Dr. Dalén and his colleagues found that the level stayed low for the next 6,000 years. “They carried with them the inbreeding that they got in the early days,” he said.

As a result, the mammoths probably suffered a high level of inherited diseases. Dr. Dalén suspects that the mammoths managed to survive for hundreds of generations because they had no predators or competitors. The Wrangel Island herd would probably have quickly (j) on the mainland.

The new study doesn’t reveal how exactly the Wrangel mammoths met their end. There’s no evidence that humans are to blame; the earliest known visitors to Wrangel Island appear to have set up a summer hunting camp 400 years after the mammoths became extinct.

For now, Dr. Dalén can only speculate about the true cause of the mammoth extinction. The war in Ukraine has made (1) it impossible for him and his colleagues to travel to Russia to do further research.

It’s possible that a tundra fire killed off the Wrangel mammoths, or that the eruption of an Arctic volcano may have done them in^{注14}. Dr. Dalén can even imagine that a migratory bird^{注15} brought an influenza virus to Wrangel Island, (k) then jumped to the mammoths and wiped them out.

“We’re still (l) with a number of possible explanations,” he said, “and we still haven’t been able to narrow it down.”

問 2 下線部（ア）、（イ）が指示するものを、それぞれ下記の①～⑤の中から一つ選び、マークシートの解答欄 、 にマークしなさい。

- (ア) ① bits of DNA from fossils on Wrangel Island
② fossils on Wrangel Island
③ Love Dalén and his colleagues
④ the Wrangel Island mammoths
⑤ two decades

- (イ) ① a summer hunting camp
② the mammoth extinction
③ the true cause of the mammoth extinction
④ the war in Ukraine
⑤ to travel to Russia to do further research

問 3 下線部（A）、（B）が表す内容に最も近いものを、それぞれ下記の①～⑤の中から一つ選び、マークシートの解答欄 、 にマークしなさい。

- (A)
- ① ある種の動物が絶滅する過程
 - ② 近親交配が被害をもたらす過程
 - ③ ある種の動物を絶滅から守る過程
 - ④ ある種の動物を近親交配から守る過程
 - ⑤ 近親交配が生じる原因を研究する過程

- (B)
- ① 絶滅危惧種の個体群を拡大させる方法
 - ② 絶滅危惧種の個体群の遺伝的多様性を維持する方法
 - ③ 回復しつつある個体群の遺伝的多様性を調査する方法
 - ④ 回復しつつある個体群の遺伝的多様性を高める方法
 - ⑤ 絶滅危惧種の個体群にかかっている負荷を調査する方法

問 4 次の①～⑤の日本語に関して、本文の内容と一致するものを一つ選び、マークシートの解答欄 にマークしなさい。

- ① Dr. Dalén とその仲間たちはウランゲリ島に生息していた14頭のマンモスのゲノムを調査し、その中の7つのゲノムをシベリア本土に生息していたマンモスのゲノムと比較した。
- ② Dr. Dalén とその仲間たちは、ウランゲリ島のマンモスの遺伝的多様性が高いという調査結果から、その島のマンモスは極めて小さな個体群から始まったと結論づけた。
- ③ 氷河期の終わりに、氷山の溶解によってシベリアの北部が水中に沈んだため、たまたまウランゲリ島に生息していた小さな群れのマンモスたちが2つの群れに分断させられた。
- ④ 遺伝的多様性に乏しかったウランゲリ島のマンモスが6,000年間生き残ることができたのは、その間に受け継いでいった遺伝病に耐性があったからだとして Dr. Dalén は考えている。
- ⑤ Dr. Dalén とその仲間たちによる今回の研究では、ウランゲリ島のマンモスが絶滅に至った経緯は明白になっておらず、絶滅の原因が人間であるという証拠は残っていない。

問 5 次の1～3のそれぞれの単語①～⑤の中から、最も強いアクセントの位置が他の四つと異なるものを一つ選び、マークシートの解答欄 ～ にマークしなさい。

1.

- ① con-clude ② dis-ease ③ ex-tinct ④ pre-fer ⑤ ref-uge

2.

- ① dis-or-der ② ex-am-ine ③ in-her-it ④ spec-u-late ⑤ tre-men-dous

3.

- ① di-ver-si-ty ② i-den-ti-cal ③ in-ves-ti-gate ④ re-con-struc-tion ⑤ re-mark-a-bly

II 次のA、B及びCの設問に答えなさい。

A. 次の1～5の日本語とほぼ同じ意味の英文になるように、() 内に適した単語を [] の指示に従って一語で解答用紙に書きなさい。

1. 日本の列車は混雑しているかもしれないが、少なくとも時間通りだ。

Japanese trains may be jammed, but at least they are ().

[pで始まる単語]

2. いくつかの重要な問題がその会議で取り上げられた。

Some important () were raised at the meeting.

[iで始まる単語]

3. A: もう始めてもいいですか。

B: はい, どうぞ。

A: May I start now?

B: Yes, go ().

[aで始まる単語]

4. 私はあの歌を聴くといつも私たちの初めてのデートのことを思い出す。

That song always () me of our first date.

[rで始まる単語]

5. 私はニューヨーク市の郊外で生まれ育った。

I was born and () up in a suburb of New York.

[bで始まる単語]

B. 以下の例に従って, 次の1~5の [] 内の単語の形を変え, 文脈に合うように () に入る一語を解答用紙に書きなさい。

(例) Certain (combinations) of sounds are not possible in English. [combine]

(例) I think that I should sell my car, but he (disagrees). [agree]

1. Many older people were () about computers. [ignore]

2. People's () differ, but their rights and opportunities should be the same. [able]

3. Everyone was () by the strange sequence of events. [fright]

4. There is a growing () among employers to hire part-time staff. [tend]

5. We needed to treat the disease without increasing the () of the patient. [comfort]

C. 次の1~5のそれぞれの日本語の意味になるように, 下記に与えられた語(句)を並べかえて英文を完成させると, 指定された位置にくるものはどれか。与えられた語群の中からそれぞれ選び, カタカナを解答用紙に書きなさい。ただし, 文頭にくる語も小文字で示してある。

1. 親が子どもの学業成績を心配するのはよくあることだ。

It [1 2 **3番目** 4 5 6 7 **8番目** 9 10]

academic performance.

(**3番目**と**8番目**)

イ. about ロ. be ハ. child's ニ. common ホ. concerned ヘ. for

ト. is チ. parents リ. their ヌ. to

2. その歌のテーマがその歌を目立つものになっていると私は思います。

[1 2 3 4 5 **6番目** 7 **8番目** 9 10] out.

(6番目と8番目)

イ. I ロ. is ハ. it ニ. makes ホ. of ヘ. stand
ト. the song チ. the topic リ. think ヌ. what

3. どの女性シンガーが史上最も美しい声を持っていると思いますか。

[1 2 3 **4番目** 5 6 **7番目** 8 9 10 11]

of all time?

(4番目と7番目)

イ. beautiful ロ. do ハ. female ニ. has ホ. most ヘ. singer
ト. the チ. think リ. voice ヌ. which ル. you

4. 私にとって、友だち何人かと公園でピクニックをするのは最高です。

To me, there [1 2 **3番目** 4 5 6 **7番目** 8 9
10 11] a park.

(3番目と7番目)

イ. a ロ. at ハ. better ニ. friends ホ. having ヘ. is
ト. nothing チ. picnic リ. some ヌ. than ル. with

5. 時々、自国では当たり前だと思っていることが、海外では奇妙に思えたり珍しく思えたりすることがある。

Sometimes, [1 2 3 4 **5番目** 6 7 8 9 10
11番目 12] weird or exotic overseas.

(5番目と11番目)

イ. can ロ. country ハ. for ニ. granted ホ. in ヘ. own
ト. seem チ. take リ. that ヌ. things ル. you ヱ. your