

2025（令和7）年度

英 語

13：30～15：10

文 学 部

英 文 学 科

一般選抜(中期日程)

注 意 事 項

1. 合図があるまでこの冊子を開いてはいけません。
2. 合図があったら受験番号を解答用紙の指定の欄に記入しなさい。
3. 問題は I から IV までで、ページ数は全部で12ページです。落丁、乱丁、印刷不明、汚れの箇所があった場合は、すみやかに申し出てください。
4. 解答は必ず解答用紙の指定された解答欄に記入しなさい。
5. この冊子は持ち帰ってください。

I 次の英文を読んで設問に答えなさい。

Scientists studying the *sperm whales that live around *the Caribbean island of Dominica have described for the first time the basic elements of how they might be talking to each other, in an effort that could one day help better protect them.

Like many whales and dolphins, sperm whales are highly social mammals and communicate by squeezing air through their *respiratory systems to make strings of rapid clicks that can sound like an extremely loud zipper underwater. The clicks are also used as a form of *echolocation to help them track their prey.

1 While they still don't know, they now think there are sets of clicks that they believe make up a "phonetic alphabet" that the whales can use to build the very rough equivalent of what people think of as words and phrases.

"We're now starting to find the first building blocks of whale language," said David Gruber, founder and president of the Cetacean Translation Initiative or CETI, an effort devoted to translating the communication of sperm whales.

In a study published on May 7 in the journal *Nature Communications*, researchers analyzed more than 8,700 *snippets of sperm whale clicks, known as *codas*. 2

Pratyusha Sharma, the paper's lead researcher, said this alphabet could then be used by the whales in an unlimited number of combinations.

"It doesn't appear that they have a fixed set of codas," said Sharma, an artificial intelligence and computer science expert at the Massachusetts Institute of Technology. "That gives the whales access to a much larger communication system," she said, explaining it was as if the whales had a very large dictionary.

Sperm whales have the biggest brains of any animal on the planet at up to

20 pounds, as much as six times the size of an average human brain. They live in *matriarchal groups of about 10 and sometimes meet up with hundreds or thousands of other whales. 3 They sleep vertically, in groups.

Gruber, a biology professor at the City University of New York, said sperm whales seem to have sophisticated social ties and *deciphering their communication systems could reveal parallels with human language and society.

To get enough examples of the sperm whale clicks in Dominica, where there is a resident population of about 200 whales, scientists created a giant underwater recording studio with microphones at different depths. Tags on the whales also record what position they are in when clicking — for example diving, sleeping, breathing at the surface — and if there are any other whales nearby they might be communicating with.

Jeremy Goldbogen, an associate professor of oceans at Stanford University, called the new research “extraordinary,” saying it had “vast implications for how we understand ocean giants.”

Goldbogen, who was not involved in the study, said that if we were one day able to understand what sperm whales were saying, that knowledge should be used for conservation purposes, like minimizing their risk of being hit by ships or reducing ocean noise levels.

Sperm whales are classified as “vulnerable” by the International Union for Conservation of Nature. 4

Diana Reiss, a marine mammal behavior and communication expert at the City University of New York, said that scientists understand certain aspects of marine animals’ communication reasonably well, including the whistles used by dolphins and the songs sung by *humpback whales.

5

“What’s new in this study is that they are trying to look at the basis for the whales’ communication system ... not just particular calls they’re

making,” she said.

Reiss, who was not involved in the new research, said she hoped we would one day be able to match the whales’ clicks to behavior.

“We will never understand what the clicks mean to another whale, but we may be able to understand what the clicks mean enough to predict their behavior,” she said. “That alone would be an amazing achievement,” she said.

CETI founder Gruber said millions and possibly billions of whale codas would be needed to collect enough data to try to work out what the whales are saying, but he expects AI to help speed the analysis. He said other sperm whale populations — the whales are found in deep oceans from the Arctic to the Antarctic — likely communicate in slightly different ways.

出典 Adapted from “Scientists learn basic building blocks of sperm whale language.” *The Japan News*. May 15, 2024.

注(*)

sperm whale マッコウクジラ

the Caribbean island of Dominica カリブ海のドミニカ島

respiratory 呼吸の

echolocation エコーロケーション(動物が音や超音波を発し、その反響で物体の距離・方向・大きさなどを知ること)

snippet 断片

matriarchal メスが支配している

decipher 判読する

humpback whale ザトウクジラ

問 1 次の英文は本文の一部です。 1 ~ 5 のどの位置に補うのが最も適切か、記号を答えなさい。ただし、同じ記号を 2 回以上使用してはいけません。

ア. But when it comes to sperm whales, even that basic knowledge is lacking.

イ. Sperm whales can grow up to 18 meters long and dive to nearly 1,000 meters to hunt for squid.

ウ. Scientists have been trying for decades to understand what those clicks might mean, with only minimal progress.

エ. The whales were hunted for centuries for the oil contained in their giant heads and the species is still recovering.

オ. They say they have found four basic components that they think make up this phonetic alphabet.

問 2 以下の質問に英語で答えなさい。

- (1) How do the scientists collect the data on sperm whale clicks?
- (2) How could the effort by the scientists help better protect sperm whales?
- (3) What might help understand the whale language sooner?

問 3 下線部 the basis は何を指すかを日本語で説明しなさい。

問 4 What has interested you most about this story? Write in English.

Ⅱ 次の英文は、中国系アメリカ人作家によるファンタジー小説です。この文章を読んで、設問に答えなさい。

One of my earliest memories starts with me sobbing. I refused to be soothed no matter what Mom and Dad tried.

Dad gave up and left the bedroom, but Mom took me into the kitchen and ⁽¹⁾ sat me down at the breakfast table.

“*Kan, kan,*” she said, as she pulled a sheet of wrapping paper from on top of the fridge. For years, Mom carefully sliced open the wrappings around Christmas gifts and saved them on top of the fridge in a thick stack.

She set the paper down, plain side facing up, and began to fold it. I stopped crying and watched her, curious.

She turned the paper over and folded it again. She pleated, packed, tucked, rolled, and twisted until the paper disappeared between her cupped hands. Then she lifted the folded-up paper packet to her mouth and blew into it, like a balloon.

“*Kan,*” she said, “**laohu.*” She put her hands down on the table and let go.

A little paper tiger stood on the table, the size of two fists placed together. The skin of the tiger was the pattern on the wrapping paper, white background with red candy canes and green Christmas trees.

I reached out to Mom’s (a). Its tail twitched, and it pounced playfully at my finger. “*Rawrr-sa,*” it growled, the sound somewhere between a cat and rustling newspapers.

I laughed, startled, and (b) its back with an index finger. The paper tiger (c) under my finger, **purring.*

“*Zhe jiao zhezhi,*” Mom said. *This is called origami.*

I didn’t know this at the time, but Mom’s kind was special. She breathed into them so that they shared her (d), and thus moved with her life. This was her (e).

Mark, one of the neighborhood boys, came over with his Star Wars action figures. *Obi-Wan Kenobi's lightsaber lit up and he could swing his arms and say, in a tinny voice, "Use the *Force!" I didn't think the figure looked much like the real Obi-Wan at all.

Together, we watched him repeat this performance five times on the coffee table. "Can he do anything else?" I asked.

(2)

Mark was annoyed by my question. "Look at all the details," he said.

I looked at the details. I wasn't sure what I was supposed to say.

1

"Show me your toys."

I didn't have any toys except my paper menagerie. I brought Laohu out from my bedroom. By then he was very worn, patched all over with tape and glue, evidence of the years of repairs Mom and I had done on him. He was no longer as nimble and surefooted as before. I sat him down on the coffee table. I could hear the skittering steps of the other animals behind in the hallway, timidly peeking into the living room.

"Xiao laohu," I said, and stopped. I switched to English. "This is Tiger."

Cautiously, Laohu strode up and purred at Mark, sniffing his hands.

2

"That doesn't look like a tiger at all. Your mom makes toys for you from trash?"

I had never thought of Laohu as *trash*. But looking at him now, he was really just a piece of wrapping paper.

3

The lightsaber flashed; he moved his arms up and down. "Use the Force!"

Laohu turned and pounced, knocking the plastic figure off the table. It hit the floor and broke, and Obi-Wan's head rolled under the couch. "Rawwww," Laohu laughed. I joined him.

4

"This was very expensive! You can't even find it in the stores now. It probably cost more than what your dad paid for your mom!"

I stumbled and fell to the floor. Laohu growled and leapt at Mark's face.

Mark grabbed Laohu and his snarl was choked off as Mark crumpled him in his hand and tore him in half. He balled up the two pieces of paper and threw them at me. “Here’s your stupid cheap Chinese garbage.”

After Mark left, I spent a long time trying, without success, to tape together the pieces, smooth out the paper, and follow the creases to refold Laohu. Slowly, the other animals came into the living room and gathered around us, me and the torn wrapping paper that used to be Laohu.

出典 Adapted from Ken Liu, *The Paper Menagerie and Other Short Stories*.

Head of Zeus, 2016.

Excerpt from the book *The Paper Menagerie and Other Stories* written by Ken Liu and published in the USA by Simon & Schuster/Saga Press.

注(*)

laohu 中国語「老虎」の英語表記 虎

purring 喉を鳴らして

Obi-Wan Kenobi オビ・ワン・ケノービ 『スター・ウォーズ』に出てくる騎士。光剣(lightsaber)で戦う。

Force フォース、ここでは超能力・神秘的力の意味

問 1 下線部(1)について、何のために Mom はこのようにしたのか、日本語で説明しなさい。

問 2 本文中の空所(a)～(e)に入る適切な語を下記から選んで答えなさい。ただし、同じ記号を 2 回以上使用することはできません。

(ア) breath (イ) creation (ウ) magic (エ) vibrated (オ) stroked

問 3 下線部(2)についてなぜ「私」はこのように言ったのか、日本語で説明しなさい。

問 4 次の英文は本文の一部です。 1 ~ 5 のどの位置に補うのが最も適切か、記号を答えなさい。ただし、同じ記号を2回以上使用してはいけません。

ア. Mark screamed, more out of fear and surprise than pain.

イ. Mark examined the Christmas-wrap pattern of Laohu's skin.

ウ. Mark was disappointed by my response.

エ. Mark punched me, hard.

オ. Mark pushed Obi-Wan's head again.

Ⅲ 次の英文は、太陽光を利用した調理法について書かれたものである。この文章を読んで設問に答えなさい。

著作物の使用許諾が得られていないため非公開

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出典 Adapted from Ian Frazier, “Brave New World Cookout.” *The New Yorker*. September 30, 2019.

注(*)

jackpot 大当たり

turmeric ターメリック(カレー用の粉末)

sizzle ジュージューという音をたてる

proselyte 転向者

align 位置を調整する

pasteurize ～に低温殺菌を行う

potable 飲用に適した

compote シロップ漬けの果物

Port-au-Prince ハイチ(カリブ海にある国)の首都

Côtes-de-Fer ハイチの自治区

問 1 下線部(1)について、どのような状態を述べているのか日本語で説明しなさい。

問 2 下線部(2)は、どのような環境にある場所を意味するのか、日本語でわかりやすく説明しなさい。

問 3 下線部(3)の理由を 70 字以内の日本語でまとめなさい。

問 4 本文中の(a)～(e)に入れるのに最もふさわしい語を、下記から選び記号で答えなさい。ただし同じ記号を 2 回以上使用してはならない。

(ア) bad (イ) halfway (ウ) cozy (エ) solar (オ) yearly

IV Your Canadian friend, Nicole, is planning a week-long trip to Japan next August and asking you for help. Please give her some travel advice, including recommendations for areas, experiences, and the reasons for them as well as how to cope with summer heat in Japan in English. The length of advice should be about 100 words. Write the number of words in () on the answer sheet.