

(平 18 前)

外 国 語

英 語

(問題部分 1 ～ 10 ページ)

注意 解答はすべて答案用紙の指定のところに記入しなさい。

外国語 (英 語) 125 点

I 次の文章を読んで、問1～5に答えなさい。(配点30点)

Dolphins are known to be smart, but a study of tool use has emphasized just how clever these sea animals can be. Female dolphins in an Australian bay seem to be learning from their mothers how to stick marine sponges* on their noses to help them hunt for fish, researchers say.

“It is the first documented case of tool use in a marine animal,” says Michael Krützen of the University of Zurich, Switzerland, who led the study into how the trick is passed from one generation to the next. Rather than being an inherited behavior, the tool use is probably being learned by daughter dolphins from their mothers, the researchers report.

Sponge-using dolphins were first described in 1997 in Shark Bay, 850 kilometers north of Perth, Australia. Since then, all dolphins known to use this tool have come from the same bay, and the vast majority have been female. Direct observations have been rare, but it is believed that the dolphins use the marine sponges to disturb the sandy sea bottom in their search for prey, while protecting their noses from scratches.

Learning to use tools from fellow creatures is thought to be very rare. Chimpanzees have been seen to use two stones to crack open nuts, for instance, and this is thought to be a culturally acquired behavior. In other instances tool use seems to be inherited. New Caledonian crows, for example, use twigs to gain access to food in small holes of trees, and can do so without having been taught by another crow.

To see whether the dolphin behavior was inherited, the researchers examined DNA from 13 spongers, only one of which was male, and from 172 non-spongers.

They found that most spongers shared similar mitochondrial DNA*, which is genetic information passed down from the mother. This indicates that probably all spongers are descended from a single “Sponging Eve”. The spongers also shared similar DNA from the nucleus*, suggesting that Eve lived just a few generations ago.

But not all the female dolphins with similar mitochondrial DNA use sponges. And when the researchers considered ten different means of genetic inheritance, considering that the sponging behavior might be linked to genes or not, they found no evidence that the behavior was carried in DNA. “It’s highly unlikely that there is one or several genes that causes the animals to use tools,” says Krützen.

Krützen points out that young dolphins spend up to four or five years with their mother, giving them lots of time to pick up the trick. “We know they are seeing it all the time,” says Janet Mann, one of his fellow researchers. In general, dolphins are known to imitate each other very well, Krützen adds.

Mann says the males probably learn sponging from their mothers as well, but do not engage in it when older, perhaps because they are too busy pursuing females to engage in a complicated search for food. She hopes to catch the dolphins in the act of learning sponge use from their mothers soon.

注 marine sponge 海綿； mitochondrial DNA ミトコンドリア DNA；
nucleus 細胞核

問1 波線部(A)と(B)の語の本文中での意味として最も適切なものを、(ア)～(エ)からそれぞれひとつ選び、記号で答えなさい。

(A) trick

(ア) a clever way of doing something

(イ) a skillful action that someone does in order to entertain people

(ウ) an action that is intended to deceive someone

(エ) something that makes things appear to be different from the way they really are

(B) means

- (ア) a way of doing or achieving something
- (イ) cruelty or unkindness
- (ウ) not wanting to spend money, or not wanting to use much of something
- (エ) the money or the resource that someone has

問2 生まれた後で、道具の使用法を文化的に身につけると考えられる動物として、本文ではどのような例が挙げられていますか。最も適切なものを、(a)~(d)からひとつ選び、記号で答えなさい。

- (a) New Caledonian crows
- (b) chimpanzees, dolphins
- (c) chimpanzees, New Caledonian crows
- (d) dolphins, New Caledonian crows

問3 下線部(3)の“Sponging Eve”の説明として最も適切なものを、(あ)~(え)からひとつ選び、記号で答えなさい。

- (あ) spongers を出産したイルカ
- (い) spongers の祖と考えられるイルカ
- (う) spongers の群れを統率していると考えられるイルカ
- (え) spongers に道具の使用法を直接おしえたイルカ

問4 下線部(4)に関して、成長後のオスのイルカがメスのイルカと異なる行動をとる理由を、20字以内の日本語で説明しなさい。ただし句読点も1字に数えま
す。

問5 下線部(1)と(2)を日本語に訳しなさい。ただし(2)は spongers および non-spongers も、その意味がわかるように、日本語に訳しなさい。

Ⅱ 次の文章を読んで、問1～5に答えなさい。(配点40点)

Origami, the art of folding paper, is now enjoyed by many people in many countries for amusement, as an educational tool and as an art form. In traditional origami, squares of paper are folded into decorations, animals, and sculptures in a limitless variety. Many cultures include one or more such paper objects among their traditions. The paper airplane immediately comes to mind, as well as the hat made from a sheet of newspaper. The Japanese crane has universal (A), and in Spain the little bird called the pajarita* is well known.

More so than in any other country, origami is part of the culture of Japan. For this reason origami is often thought to be a Japanese art. The Japanese word *origami* translates as paper folding, *ori* meaning to fold, and *gami* meaning paper. As in most Asian arts, traditional origami includes cultural motifs which relate to deep-seated symbolism. For example, the crane, which lives to a great age, represents good wishes for a long life. Butterflies are associated with Japanese weddings as symbols of happiness in marriage.

(ア) the origins of origami reach well into past centuries, during the last 50 years it has grown as a recreational craft with international impact. A major impetus* to origami (イ) it is now practiced began in the late 1950s. Lillian Oppenheimer in the United States and Robert Harbin in England, among others, stimulated public (B), which resulted in the formation of paperfolding societies in many countries.

Origami is often thought of as a child's (C), which of course it is. (ウ), many adults have discovered creative expression in paperfolding, not only as an art, but with applications in education, engineering and even space exploration. Many schools include origami in the curriculum for math and science in elementary through high-school grades. Robert Lang (U.S.A.), a leading paperfolder, has devised software for creating origami models.

Paperfolders find origami to be a (D) and relaxation at the same time, whether they enjoy folding a simple toy or a complex animal form which could not have been imagined a few years ago. Creators around the world have established reputations as visual artists by inventing entirely new techniques.

In modular origami a number of similar units are folded in a set pattern and then combined into a compound structure. The sculptural parts, which give many contemporary origami models their representational (E), are produced by folding with wet paper.

Technique, however, is only technique. To be recognized as a work of art, an origami object must touch the viewer by conveying a sense of life. Origami forms speak to an observer (エ) they demonstrate the creator's inner spirit reflected in the rich variations possible in a piece of paper.

注 pajarita パハリータ(スペインに伝わる伝承的な鳥の折り紙) ;
impetus 刺激

問1 空所(A)～(E)に入る最も適切なものを、下からそれぞれひとつ選び、その単語を書きなさい。ただし同じ単語は一度しか使えません。

appeal awareness challenge pastime qualities

問2 下線部(1)の deep-seated symbolism とはどのようなものか、例を挙げて 35 字以内の日本語で説明しなさい。ただし句読点も 1 字に数えます。

問3 空所(ア)～(エ)に入る最も適切なものを、下からそれぞれひとつ選び、その単語を書きなさい。ただし同じ単語は一度しか使えません。また必要があれば単語を大文字で書き始めなさい。

although as because yet

問4 下線部(2)を日本語に訳しなさい。

問5 (a)~(i)のうち、本文の内容と一致するものを3つ選び、記号で答えなさい。

- (a) Applications of origami can be found in education and engineering.
- (b) Lillian Oppenheimer and Robert Harbin founded the international paperfolding society.
- (c) Modular origami is part of the traditional paperfolding.
- (d) People recognize an origami form as a work of art when it reflects a sense of life.
- (e) Quite a few cultures have paperfolding in their traditions.
- (f) Technique is meaningless in paperfolding.
- (g) The origami creator's inner spirit cannot be reflected in a single piece of paper.
- (h) The origins of traditional origami go back to the late 1950s.
- (i) The technique of origami is not used in space exploration.

- Ⅲ 次の文章は、取材のためにロンドンを訪れたのをきっかけにロンドンに住み続けることになったハンガリー人ジャーナリストのものであります。これを読んで、問1～4に答えなさい。(配点35点)

When I was sent to England in 1938, I thought I knew English fairly well. In Budapest my English proved quite sufficient. I could (ア) it. On arrival in this country, I found that Budapest English was quite different from London English. I would not like to seem biased, but I found Budapest English much better in many ways.

In England I found two difficulties. First: I did not understand people, and secondly: they did not understand me. It was easier with written texts. Whenever I read a leading article in *The Times**, I understood everything perfectly well, except that I could never make out whether *The Times* was for or against something. In those days I put this down to my lack of knowledge of English.⁽¹⁾

The first step in my progress was when people started understanding me while I still could not understand them. This was the most talkative period of my life. Trying to hide my shortcomings, I went on talking, keeping the conversation as unilateral* as possible.

I reached the stage of intelligibility fairly quickly, (イ) a friend of mine who discovered an important secret, namely that the English mutter and mumble*. Once we noticed a sausage-like thing in a shop window marked PORK BRAWN. We mistook it for a Continental kind of sausage and decided to buy some for our supper. We entered the shop and I said: "A quarter of pork brawn, please." "(A)?" asked the shopkeeper looking scared. "A quarter of pork brawn, please," I repeated. I repeated it again. I repeated it a dozen times with no success. I talked slowly and softly; I shouted; finally I tried baby-talk. The shopkeeper still (ウ) whether we wanted to buy or sell something. Then my friend had a brain-wave*. "(B)," he said to me and started mumbling

under his nose in a hardly audible and quite unintelligible manner. The shopkeeper's eyes lit up: “(C),” he said happily, “you want a quarter of pork brawn. (D)?”

The next stage was that I began to understand foreigners but not the English or the Americans. The more atrocious a foreign accent someone had, the clearer he sounded to me.

But time passed and my knowledge and understanding of English grew slowly. Until the time came when I began to be very proud of my knowledge of English. Luckily, every now and then one goes through a sobering experience⁽²⁾ which teaches one to be more humble. Some years ago my mother came here from Hungary on a visit. She expressed her wish to take English lessons at a language school, which some of her friends attended. I accompanied her to the school and we were received by a man. I asked about the various classes and said that we were interested in the class for beginners. I received all the necessary information and conducted a lengthy conversation with him, (E) that my English sounded vigorous and idiomatic. Finally, I paid the fees for my mother. He looked at me with astonishment and asked: “Only for one? (E)?”

注 *The Times* 『タイムズ』(イギリスの新聞)； unilateral 一方的な；
mutter and mumble もぐもぐ言う； brain-wave ひらめき

問1 空所(ア)～(エ)に入る最も適切な語句を、(a)～(i)からそれぞれひとつ選び、記号で答えなさい。ただし同じ語句は一度しか使えません。

- | | |
|---------------------|--------------------|
| (a) get along with | (b) had no idea |
| (c) in order | (d) in place of |
| (e) in spite of | (f) in the belief |
| (g) scarcely manage | (h) seemed to know |
| (i) thanks to | |

問2 空所(A)～(E)に入る最も適切な文を、(あ)～(お)からそれぞれひとつ選び、記号で答えなさい。ただしひとつの文は一度しか使えません。

(あ) And what about you

(い) I see

(う) Leave it to me

(え) What was that

(お) Why didn't you say so

問3 下線部(1)を、this がどういうことを指すのかを明らかにしながら、日本語に訳しなさい。

問4 下線部(2)を日本語に訳しなさい。

IV 今までの人生で、過去のある特定の時点にもう一度戻れるとしたら、あなたはどの時点に戻り、何をしたいですか。その理由を具体的に示し、80語程度の英語で答えなさい。ただし第一文は If で書き始めなさい。(配点 20 点)