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富山大学

科目

外国語(英語)

医学部医学科

注 意

1. 開始の合図があるまで、この問題冊子を開いてはいけません。
2. 問題は1ページから11ページにわたっています。問題冊子に不備がある場合は、直ちにその旨を監督者に申し出てください。
3. 解答用紙は4枚で、問題冊子とは別になっています。解答は、すべて解答用紙の所定の欄に記入してください。指定された解答用紙以外に記入した場合は、評価(採点)の対象としません。
4. 受験番号は、4枚の解答用紙のそれぞれの上部の欄に記入してください。
5. 解答用紙は持ち帰ってはいけません。
6. 下書き用紙には、下書き用のマス目を書いてありますので、活用してください。
7. 問題用紙と下書き用紙(2枚)は持ち帰ってください。

1 次の文章を読み、問いに答えなさい。

Alien species such as American grey squirrels and Asian muntjac deer\* have become so well established in Britain that some should be reclassified as natives, a scientific report has suggested. Many such creatures are so numerous that they have become an integral part of British ecosystems, according to the study co-authored by Professor David Macdonald, director of Oxford University zoology department's Wildlife Conservation Research Unit. Some alien invaders may even become reliant on Britain for their survival—as with the Chinese water deer, which is declining in its homeland. Macdonald and his co-author, Dr Dawn Burnham, believe the time has come for a rethink on attitudes to invasive species with those that do relatively little harm or which would cost too much to eradicate\* being considered for “ecological citizenship” of Britain. The exceptions would be species such as American mink, which have a damaging effect on British wildlife.

Such views are likely to prove controversial. Britain is facing a surge of invaders with scientists recording 3,800 alien species, including 44 mammals, 326 birds, 1,821 flowering plants and 865 insects. One of the worst invaders is the harlequin ladybird, a voracious predator that preys on other ladybirds and threatens many other insect species. It arrived in Essex in 2004 but has already reached the Orkneys. Its arrival in an area appears to herald rapid declines in native species. Another is the ring-necked parakeet, which is spreading so fast that the government has just allowed landowners to shoot them without a licence.

Macdonald and Burnham wrote their report, *The State of Britain's Mammals*, for the People's Trust for Endangered Species\*. They suggest that each invasive mammal species should be considered on its merits and not persecuted just for being foreign. They write: “There comes a point where a non-native has been exerting its influence on native biodiversity for so long that a new community has emerged to which the intruder is integral so its removal would no longer rescue or restore the original natural state. At that point the intruder's origins no longer justify killing it.”

They add: “The decision to consider a naturalised nonnative species as an ecological citizen should depend solely on the nature of the damage it causes to native biodiversity.” The grey squirrel would probably be among the candidates for such a reassessment. Introduced to Britain in 1828, it has spread across most of the country, driving out the smaller red squirrel and possibly damaging wild bird populations by eating their eggs. The researchers argue, however, that in many areas the animal is now part of Britain's wildlife and it would be difficult to get the public support and money needed for eradication. But they say that the animals must still be heavily controlled in areas such as Scotland, where the red squirrel still survives.

Some invaders are already ecological citizens. One such is the brown hare, which was introduced to Britain by the Romans but which is so widely accepted that its recent decline has prompted government to list it as an endangered species. Similarly, rabbits, brought to Britain in the 11th century and now responsible for £115 m of losses to farmers each year, are also seen as British. Macdonald points out that although they do damage they also maintain grasslands and provide food for predators. Soon, such “ecological citizens” could be joined by the Chinese water deer, which is facing rapid decline in its home regions in China and Korea. In Britain, its population has surged to several thousand, accounting for 10% of the global population. “Britain has become an ark\* for these creatures, so conserving it might help protect the species,” Burnham said. The American mink, by contrast, would probably fail the ecological citizenship test, because of the damage it causes to Britain’s native wildlife, especially the water vole.

The researchers have, however, called for a rethink of the emotive language used to describe such species because terms like alien are too similar to those in debates about immigration. Objecting to such terms as “American tree-rats” to describe grey squirrels, they said: “Terms like ‘alien species’ can risk jingoistic\* or moralistic stances.” They suggest that researchers should instead use such neutral terms as “non-native”.

Macdonald said: “There are no simple rules for deciding whether an animal is (D) for ecological citizenship. We have to look at each species, case by case, and see how it is (E) in with our native wildlife.”

(Jonathan Leake, *www.timesonline.co.uk*, slightly modified)

\*注: muntjac deer ホエジカ(動物) eradicate 根絶する  
 the People’s Trust for Endangered Species 動物保護が目的の NGO の一つ  
 ark (ノアの)箱舟・避難所 jingoistic 対外強硬主義的な

(1) 下線部(A)の some should be reclassified as natives に該当するものは、以下の(a)～(i)の選択肢のうちどれですか。該当するもの全てを選び、記号で答えなさい。なお、以下の語句については本文中に二重線        が引いてあります。

- |   |                        |
|---|------------------------|
| (a) American grey squirrels(または grey squirrel(s)) | (b) Chinese water deer |
| (c) American mink                                 | (d) harlequin ladybird |
| (e) ring-necked parakeet                          |                        |
| (f) red squirrel                                  | (g) brown hare         |
| (h) rabbits                                       |                        |
| (i) water vole                                    |                        |

- (2) 以下の英文が下線部(B)の“Such views”の内容を具体的に言い換えたものにするためには、下線をどのような英語で埋めたらよいですか。以下の(a)～(f)から、最もふさわしいものを一つ選び、記号を解答欄に書きなさい。

We should change our views on alien species \_\_\_\_\_.

- (a) in order to precisely define the notion of “ecological citizenship”
- (b) by disregarding their harmful effects on British ecosystems
- (c) because they are all reliant on Britain’s ecosystem for their survival
- (d) and allow some of them to obtain an “ecological citizenship” of Britain
- (e) if they have already been granted “ecological citizenship” of Britain
- (f) so that we can remove harmful species from Britain

- (3) 下線部(C)を日本語に訳しなさい。

- (4) 以下の文章は第4段落(They add: “The decision to ~ the red squirrel still survives.)から第5段落(Some invaders are already ~ especially the water vole.)までの内容の要点をまとめたものです。空欄(a)～(d)を埋める適切な日本語を、それぞれ指定の文字数で答えなさい。但し、句読点も一字に数えます。

Alien species を受け入れるかどうかは、(a) (30字程度) で判断すべきである。しかし、実際にはそのalien speciesがすでに英国の (b) (12字程度) ており、(c) (20字程度) が難しい動物もいる。また、alien speciesが (d) (15字程度) というような場合には、地球規模の動物保護の観点から、その受け入れが考えられなくてはならない。

- (5) 本文中の空欄(D)、(E)に最も適した語句を以下から一つずつ選び、適切な形に変化させ、解答欄に書きなさい。

damage	endanger	fail	fit	invade
obtain	protect	qualify	survive	

2 は次のページから始まります。

2 次の文章を読み、問いに答えなさい。

He emerged from the car accident alive but alone, there and not there: a young man whose eyes opened yet whose brain seemed shut down. For five years he lay mute and immobile beneath a diagnosis — “vegetative state” — that all but ruled out the possibility of thought, much less recovery.

But in recent months at a clinic in Liège, Belgium, the patient, now 29, showed traces of brain activity in response to commands from doctors. Now, according to a new report, he has begun to communicate: in response to simple questions, like “Do you have any brothers?,” he showed distinct traces of activity on a brain imaging machine that represented either “yes” or “no.”

Experts said Wednesday that the finding could alter the way some severe head injuries are diagnosed — and could raise troubling ethical questions about whether to consult severely disabled patients in their care. They agreed that the new study exposed the limits of the current bedside test for diagnosing mental state: checking whether patients’ eyes can track objects, and carefully looking for any signs, eye blinks for example, in response to questions or commands.

“I’m convinced as an observer that in these few cases, the M.R.I.\* technique, in these researchers’ hands, gives us a window into human consciousness that we have not had and that potentially adds to the clinical exam we currently use,” said Dr. James L. Bernat, a professor of neurology at Dartmouth Medical School in New Hampshire.

In the new paper, researchers in Britain and Belgium studied 54 patients living in states of persistent unconsciousness. Of these, 23 had a diagnosis of “vegetative state,” meaning they were not able to signal any response to commands or questions. In 2006, the same research group reported that one of the 23 “vegetative” patients showed on imaging tests that her brain was responding to commands. When doctors asked her to think of playing tennis, areas of her motor cortex\* leapt to life. When asked to think of being in her house, spatial areas\* in the brain became active.

In the current experiment, the researchers found that three other patients identified as vegetative showed similar responses. To open a channel of communication, they instructed one of them, the 29-year-old man, to associate thoughts about tennis with “yes” and thoughts about being in his house with “no.” They then asked questions, repeating the procedure numerous times, switching the associations — tennis with yes, then with no — to make sure the patient was in fact making conscious choices. The researchers had previously tested the technique in healthy volunteers.

“We asked basic biographical questions, like ‘Is your father’s name Thomas?’ and ‘Have you ever been to the United States?’” said Adrian M. Owen, a neuroscientist at the Medical Research Council in Cambridge, England, who developed the method and was a co-author of the paper. “We then checked whether the answers were correct. They were.”

Over all, only 5 of the 54 patients — four identified as vegetative and one as minimally conscious — showed any meaningful brain activity on the M.R.I. when prompted, perhaps because it was too feeble to be picked up, because the timing was wrong or because the activity simply was not there.

In those rare cases where brain activity is detectable, doctors might be able to ask immobilized patients if they are feeling pain, for example, and, through a series of yes-or-no questions, where.

A two-way channel to an immobilized, severely brain-injured person also opens up a world of ethical challenges. “If you ask a patient whether he or she wants to live or die, and the answer is die, would you be convinced that that answer was sufficient?” said Dr. Joseph J. Fins, chief of the medical ethics division at Weill Cornell Medical College in New York. “We don’t know that. We know they’re responding, but they may not understand the question. Their answer might be ‘Yes, but’ — and we haven’t given them the opportunity to say the ‘but.’”

“We’ve opened up a communication channel with this technique, but in some ways it’s like a very bad cellphone connection.”

(Benedict Carey, *The New York Times*, slightly modified)

\*注：M.R.I. 磁気共鳴映像(画像診断装置の一つで、活動している脳の部位を画像化できる機器)

motor cortex (大脳)運動皮質

spatial area (大脳)空間野

(1) 下線部(A)は具体的にはどのような状態を述べているのか。本文の内容に即し簡潔な日本語で説明しなさい。

(2) 下線部(B)の内容を具体的に例示している本文の箇所を日本語に訳しなさい。

(3) 次の英文は下線部(C)の実験の内容を描写したものです。本文の内容に沿うように、語数の指示に従って、(a)～(c)の空欄に適切な英文を書きなさい。

(a) In this experiment, the patient was first trained to associate thoughts about playing tennis with “yes”, while \_\_\_\_\_ . (10語以内)

(b) Then the researchers asked the patient to \_\_\_\_\_ .  
(20語以内)

(c) By this code switching, the researchers were able to see whether \_\_\_\_\_ .  
(10語以内)

(4) 下線部(D)を日本語にしなさい。

(5) 下線部(E)の比喩の具体的な内容を150字以内の日本語で説明しなさい。但し、句読点も一字に数えます。



3 は次のページから始まります。

3 次の各問いに答えなさい。

(1) (a)～(e)のそれぞれについて、①の文とできるだけ近い意味になるように②の文を完成させなさい。

(a) ① I recall my happy childhood every time I see this video.

② This video \_\_\_\_\_.

(b) ① Regular exercise can make a big difference to your state of health.

② It \_\_\_\_\_.

(c) ① Higher interest rates will drive smaller firms out of business.

② If \_\_\_\_\_.

(d) ① Tatsuya regretted buying the used car because of the high cost of repairs.

② Tatsuya wished \_\_\_\_\_  
because it \_\_\_\_\_.

(e) ① What is most important in learning a foreign language is your active involvement in learning tasks.

② When you learn a foreign language, nothing can \_\_\_\_\_  
\_\_\_\_\_.

(2) 次の各文の空所に入れるのに最も適切な語句を①～④から一つ選び、番号を解答欄に書きなさい。

(a) Tonight's concert will be held ( ) flood relief.

① for aid from      ② in aid of      ③ with the aid at      ④ through our aid

(b) There were over 30,000 ( ) at the football match.

① observances      ② viewers      ③ watchers      ④ spectators

(c) ( ) the graduate students have to do is study harder.

① All      ② Everything      ③ Just      ④ Only

(d) We were so hungry that we ( ) the nearest restaurant.

- ① located in      ② headed for      ③ walked over      ④ held back

(e) My mother is a nurse and she is often on ( ) in her hospital all night.

- ① work      ② charge      ③ duty      ④ service

(f) I was getting ( ) spam mail that I had to change my e-mail address.

- ① so much      ② a lot of      ③ many      ④ too much

(g) Don't sit like that ( ) you'll end up with back problems.

- ① if      ② unless      ③ otherwise      ④ as long as

(h) A terrible accident took place and every ( ) doctor was called to the hospital.

- ① hasty      ② available      ③ emergent      ④ bustling

(i) I hope you don't mind me ( ) so late at night.

- ① for telephoning      ② to telephone  
③ to have telephoned      ④ telephoning

(j) Children ( ) endless pleasure in playing with simple things like water.

- ① give      ② make      ③ cause      ④ find

4 以下は、日本とアメリカ合衆国の高校生の意識調査の結果です。これを見て気がついたこと、感じたことを英語で自由に表現してください。ただし、以下の①～③の各指示にしたがって作文すること。

- ① 単に具体的な数字を並べるのではなく、話題を膨らませて作文すること。
- ② 解答用紙の解答欄を埋める程度の長さの文章を作ること。
- ③ 解答用紙のひとマスに英単語を一つずつ記入すること。ただし、長い英単語の場合にはひとマスを超えてもかまいません。

問 あなたが学校で最も充実していると感じる時はどんな時ですか？(複数回答可)

	日本(%)	米国(%)
1. 好きな授業を受けている時	29.7	78.5
2. 生徒会活動などを行っている時	3.0	8.3
3. 親しい友人と一緒にいる時	77.3	88.4
4. 部活動をしている時	36.8	—
5. 先生に褒められた時	7.1	39.3
6. よい成績を取った時	31.5	81.6
7. 文化祭, 運動会の時	44.1	—
8. 勉強に打ち込んでいる時	7.5	25.3
9. 自分の個性や特技を生かした時	37.3	64.2
10. 学問の楽しさを発見した時	14.4	20.8
11. その他	3.9	5.4
12. 充実していると感じた時はない	7.7	4.6
無回答	0.3	0.0

日本青少年研究所「高校生の生活と意識に関する調査」(2004年)を一部改題して引用

注(1) 表中の数字は、各項目を「学校で最も充実していると感じる時」と答えた高校生の割合です。

(2) 4と7の項目についてはアメリカ合衆国では調査が行われていません。