

◇ 英 語

英 2-1～英 2-10 まで 10 ページあります。

I 次の英文を読み、設問に答えなさい。解答はすべて所定の解答欄にマークしなさい。

We tend to think of plants as the furniture of the natural world. They don't move, they don't make sounds, they don't seem to respond to anything—at least not very quickly. Grass doesn't cry when you cut it, flowers don't scream when they're picked. But as is often the case, our human view of the world misses quite a lot. Plants talk to each other all the time. And the language is chemical.

Over the years, scientists have reported that different types of plants, from trees to tomatoes, release *compounds into the air to help neighboring plants. These chemical warnings all have the same purpose—to spread information about one plant's disease so other plants can defend themselves. But exactly how plants receive and act on many of these signals is still mysterious.

A group of researchers in Japan have identified one chemical message and traced it all the way from release to action. The scientists looked at tomato plants infested by a common *pest, the cutworm caterpillar. To start out, they grew plants in two plastic compartments connected by a tube. One compartment had infested plants and was placed *upwind. The other component, placed *downwind, had uninfested plants. The downwind plants were later exposed to the cutworm caterpillar. The results showed that the plants that had previously been near sick neighbors were able to defend themselves better against the caterpillar.

The researchers also studied leaves from exposed and unexposed plants. They found one compound showed up more often in the exposed plants. The substance is called HexVic. When the scientists fed HexVic to cutworms, it knocked down their survival rate by 17%. The scientists identified the source of HexVic, and sprayed it lightly over healthy plants. Those plants were then able to start producing the caterpillar-killing HexVic. Researchers confirmed that uninfested plants have to build their own weapon to fight off bugs and diseases. How do they know when to play defense? They are warned first by their friendly plant neighbors.

It is a complex tale, and it may be happening in more plant species than tomatoes. It may also be happening with more chemical signals that are still unknown to us. For now though, we know that plants not only communicate, they look out for one another.

*compounds 化合物 *pest 害虫 *upwind 風上に *downwind 風下に

解答番号 ~

次の1～5の文の空所に入れるべき最も適切な表現を本文の内容に合うように①～④から一つずつ選びなさい。

1 The word "()" best shows that we can no longer think of plants as "the furniture of the natural world".

- ① communication
- ② feelings
- ③ movement
- ④ silence

2 Chemicals sent between plants ().

- ① confuse other plants
- ② feed other plants
- ③ help other plants
- ④ make other plants sick

3 The experiment with tomato plants showed that ().

- ① a downwind plant can learn about the state of an upwind plant
- ② downwind plants are weaker than upwind plants
- ③ the cutworm caterpillar prefers downwind plants
- ④ there is no difference between upwind and downwind plants

問題は次のページに続きます。

4 HexVic ().

4

- ① extends the life of cutworm caterpillars by seventeen percent
- ② is sprayed naturally by plant leaves on themselves
- ③ makes healthy leaves unhealthy
- ④ reduces the life of cutworm caterpillars

5 In conclusion, the article tells the reader that ().

5

- ① communication ability is probably limited to tomato plants
- ② plants cannot look after each other
- ③ scientists are just beginning to understand plant communication
- ④ the communication process between plants is simple

このページは空白です。

II 会話の空所 から に入る最も適切な表現を選択肢①～⑨から一つずつ選びなさい。解答はすべて所定の解答欄にマークしなさい。

A: This is my first real vacation in three years! I'm so excited! Where can we go?

B: Well... let's see. Where have you been before on vacation?

A: I've been hiking in the mountains. My sister and I went last summer for two days.

B: I think hiking's a little boring. Let's do something exciting. ()

A: No, I haven't been to New Zealand and I will never try bungee jumping because it's too dangerous.

B: OK. No bungee jumping, but how about going to New Zealand, anyway? I think Queenstown is the most beautiful city in the world and it won't be crowded right now. We can also see a rugby game. ()

A: No, I haven't. Is it exciting?

B: Actually, it's very exciting, but it's very rough, too.

A: I don't think I want to see a rugby game, but I like beautiful scenery and the scenery is good, right?

B: It's amazing! Queenstown has some of the best scenery in the country.

A: ()

B: You know, the tickets aren't too expensive at this time of year. The round-trip airfare is about one hundred thousand yen.

A: Hmm. ()

B: Well, it is, actually. About twelve hours, but they have some first class resorts with natural spas. They're really luxurious...

A: ()

B: I heard they are about 10 minutes away by shuttle bus.

A: OK, then. Sounds great. Let's go!

B Yay! Queenstown, here we come!

選択肢

- ① Do you live in New Zealand?
- ② Do you play rugby?
- ③ Have you ever been to New Zealand and tried bungee jumping?
- ④ Have you ever seen a rugby game?
- ⑤ How far are they from the airport?
- ⑥ Is it a big airport?
- ⑦ Is it a really long flight?
- ⑧ What's the price for a ticket to Queenstown?
- ⑨ Where is Queenstown?

III 次の広告を読んで、設問に答えなさい。解答はすべて所定の解答欄にマークしなさい。

Harbor Highlights Cruise

Captain Cook Cruises

Cost: \$27

Itinerary:

Sydney's best value for money sightseeing cruises. See all the harbor's best-known landmarks. The cruise is fully narrated and also stops at Darling Harbor for a visit to Sydney Aquarium (Sydney Aquarium entry is at own expense).

Child Policy:

Infant: 0-4 years - free of charge.

Child: 5-14 years - child rates apply.

Departure Days:

Daily except for December 25, 26, 31, January 26, February 14.

Departure Time: 2:30 pm.

Duration: 1 hour 15 minutes.

Not Included:

- Meals.
- Transfers.
- Hotel pickup.
- Hotel drop off.

Departure Point: No. 6 Jetty, Circular Quay.

解答番号

11

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18

次の1~8について、広告の内容に合うものはそれぞれの解答欄の①を、広告の内容に合わないものは解答欄の②をマークしなさい。

1 The cruise price includes entry to Sydney Aquarium.

11

2 You can take this cruise on Christmas Day.

12

3 Lunch is provided on this cruise.

13

4 This cruise only leaves once a day.

14

5 This is an afternoon cruise.

15

6 After returning to Circular Quay, the company will take you back to your hotel.

16

7 This company claims that their cruise is the best quality for the price.

17

8 This cruise passes by the most famous places on Sydney Harbor.

18

V 次の1～3において語群を並べ替えて意味の通じる英文を作りなさい。語群から文の指定された二ヶ所に入る語句を選び、その語句の番号を所定の解答欄にマークしなさい。

1 What do () () () () () () Kansai

International Airport from here?

- | | | |
|----|----------|----------------|
| 語群 | ① is | ② the best way |
| | ③ think | ④ to |
| | ⑤ to get | ⑥ you |

2 It was () () () () () ()

a reply mail from my sister.

- | | | |
|----|--------|--------------|
| 語群 | ① I | ② last night |
| | ③ not | ④ received |
| | ⑤ that | ⑥ until |

3 It's () () () () () ()

the housework.

- | | | |
|----|---------|-------------|
| 語群 | ① all | ② fair |
| | ③ me | ④ not |
| | ⑤ to do | ⑥ to expect |