

# 英 語

## 問題冊子 2

注 意

「問題冊子 2」に印刷されている問題は、**2** から **4** までで、2 ページから 16 ページまであります。

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次の対話の文章を読んで、あとの各問に答えよ。

(\* 印の付いている単語・語句には、本文のあとに〔注〕がある。)

*Mayu and Teo are second-year high school students. Mayu is a member of the art club, and Teo belongs to the soccer club. One May morning, Mayu is painting a picture in the school garden. Luna Okita, their ALT, comes to her.*

Ms. Okita: Hi, Mayu. I often see you here.

Mayu: Hi, Ms. Okita. I love the roses here. They're beautiful, especially in the morning light.

Ms. Okita: The roses know you love them. If you take good care of them, they'll bloom with beautiful flowers.

Mayu: 1-a I sometimes feel they're smiling at me. That white rose, "MOONLIGHT," and this bright yellow rose, "SUNRISE," are my favorites. I've just begun painting a picture of them. I really love their colors.

Ms. Okita: I'm glad to hear that. They're very special to me, too.

*After morning soccer practice, Teo runs to the school garden.*

Teo: Good morning, Ms. Okita. Mayu, we're already five minutes late! Let's hurry to the \*chemistry room!

Mayu: Why? It's still 8:05.

Teo: Did you forget? Mr. Ide told us to come to 【① period ② minutes  
(2) ③ prepare for ④ begins ⑤ before ⑥ the experiment ⑦ the first ⑧ thirty】.

Mayu: Oh, no! I forgot. I have to go, Ms. Okita, but I have something to tell you. Can I see you after school?

Ms. Okita: Sure, Mayu. Let's talk about it later.

*During the lunch break, Mayu and Teo are talking in the classroom.*

Teo: Is everything OK, Mayu?

Mayu: Well ...

Teo: You forgot our promise to Mr. Ide. You forgot to bring your math homework. You left your lunch box at home. 1-b

*Mayu:* I can't hide anything from you. Last night my father told me we're moving to Sydney at the end of July because of his new business.

*Teo:* Oh ... I don't know what to say ... I'll miss you.

*Mayu:* Me, too. I don't want to go.

*Teo:* Oh, don't be so sad, Mayu. You can make new friends there. When my family and I moved next door to you from Singapore, you helped us a lot. We've been good friends and we always will be.

*Mayu:* Thank you for encouraging me, Teo.

*Teo:* No problem. I-c Oh, our English class will begin soon. Ms. Okita said we'll have a guest from the U.K.

*Ms. Okita introduces today's guest, Asahi Mori. Ms. Mori talks about her work.*

*Ms. Mori:* I teach horticulture at a university in London. Maybe you're wondering what horticulture is. The word comes from \*Latin. *Horti* means "garden" and *culture* means "growing plants." So horticulture is the study of growing plants.

*Teo:* How did you decide to study horticulture in the U.K.?

*Ms. Mori:* Well, my family and I moved to London when I was a high school student.

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So I took horticulture courses at college.

*Ms. Okita:* Asahi, tell them what you're studying now.

*Ms. Mori:* I'm studying horticultural \*therapy. We use plants and gardens to improve our physical and \*mental health. Through \*gardening activities outside, patients become stronger and \*gain a \*sense of purpose.

*Mayu:* I thought horticulture is all about making gardens.

*Ms. Mori:* Many people think so, but horticulture also provides possible solutions to environmental problems such as climate change and food \*shortages. For example, some plants protect us from heat or \*storms, and some plants

4

*Teo:* Understanding plant \*diversity saves lives. This lesson encourages us to study harder.

*Ms. Okita:* If anyone has more questions, come to the school garden later. We'll be there.

*After school, Mayu and Teo meet Ms. Okita and Ms. Mori at the school garden.*

*Ms. Mori:* Luna just told me about you two. Mayu, you're good at painting, right?

*Mayu:* I love art. My dream is to work at a museum to \*promote it.

*Ms. Mori:* That's great! Teo, what's your dream?

*Teo:* I'm interested in engineering and want to design robots that can do difficult work for humans.

*Ms. Okita:* Your future dreams make me proud of you.

*Teo:* By the way, how do you know each other?

*Ms. Mori:* Luna and I were classmates here. As I told you, I moved to London, but we've been great friends even though we're far from each other.

*Mayu:* Actually, my family and I are moving to Sydney because of my father's job, Ms. Okita.

*Ms. Okita:* l-d I see now why you were quieter than \*usual today.

*Ms. Mori:* Luna, do you remember what our teacher, Mr. Sato, told us before I left for London?

*Ms. Okita:* Of course. When you begin a new life, you may face difficulties at first, but there are always things you can do. Any place can be home. Do your best in new places until your talents \*blossom. He said that and then \*planted these white and yellow roses for Asahi and me. He also \*named them after us.

*Mayu:* Now I understand why they're very special to you.

*Ms. Okita:* Don't \*hesitate to open a new door. It can \*lead to another wonderful place.

*Ms. Mori:* And some things never change. \*Trust in your friendship.

[注] chemistry 化学

therapy 療法

gardening 庭造り

sense of purpose 目的意識

storm 嵐

promote 振興する

blossom 開花する

name ~ after ... …にちなんで~に名付ける

lead to ~ ~へ導く

Latin ラテン語

mental 精神の

gain 得る

shortage 不足

diversity 多様性

usual 普段の

plant 植える

hesitate ためらう

trust in ~ ~を信じる



〔問 1〕 l-a ～ l-d の中には、それぞれ次の①～⑥のいずれかの英文が入る。それぞれに入る英文を並べた組み合わせとして最も適切なものを、下のア～カの中から一つ選べ。

- ① I'm sure you'll be OK.
- ② It's something you want me to look for.
- ③ That's the thing you wanted to tell me.
- ④ That's not like you.
- ⑤ They're like humans.
- ⑥ You're not going to get away from here.

|   | l-a | l-b | l-c | l-d |
|---|-----|-----|-----|-----|
| ア | ②   | ⑥   | ①   | ③   |
| イ | ②   | ⑤   | ④   | ⑥   |
| ウ | ②   | ⑤   | ③   | ⑥   |
| エ | ⑤   | ④   | ①   | ③   |
| オ | ⑤   | ④   | ③   | ⑥   |
| カ | ⑤   | ⑥   | ①   | ③   |

〔問 2〕 Mr. Ide told us to come to 【 ① period ② minutes ③ prepare for ④ begins <sup>(2)</sup> ⑤ before ⑥ the experiment ⑦ the first ⑧ thirty 】. とあるが、本文の流れに合うように、【     】内の単語・語句を正しく並べかえたとき、【     】内で1番目と4番目と8番目にくるものの組み合わせとして最も適切なものを、次のア～カの中から一つ選べ。

|   | 1番目 | 4番目 | 8番目 |
|---|-----|-----|-----|
| ア | ③   | ②   | ④   |
| イ | ③   | ⑤   | ①   |
| ウ | ③   | ⑧   | ⑦   |
| エ | ⑥   | ②   | ①   |
| オ | ⑥   | ④   | ⑤   |
| カ | ⑥   | ①   | ②   |

〔問 3〕 本文の流れに合うように、 の中に次の①～④の英文を入れるとき、その最も適切な順番を表しているものを、下のア～カの中から一つ選べ。

- ① As I visited other gardens, I became more interested in ways of designing gardens.
- ② Many U.K. customs were new to me and I couldn't enjoy school life there at first.
- ③ I admired the beauty of its gardens.
- ④ One day my mother took me to a castle near London to cheer me up.

|   |               |
|---|---------------|
| ア | ① → ③ → ④ → ② |
| イ | ② → ① → ③ → ④ |
| ウ | ② → ④ → ③ → ① |
| エ | ③ → ② → ① → ④ |
| オ | ③ → ④ → ① → ② |
| カ | ④ → ① → ③ → ② |

〔問 4〕 本文の流れに合うように、 の中に英語を入れるとき、最も適切なものは、次のうちではどれか。

- ア grow so fast that it is difficult to remove them from gardens
- イ grow in hot and dry areas and feed people there
- ウ with flowers are grown to decorate rooms
- エ with flowers are grown as gifts to celebrate happy events

〔問 5〕 次の英文は、Mayu が学校から帰ったあと家で書いた日記である。 に入る最も適切な 1 語を本文中からそのまま抜き出せ。

Today Ms. Okita and Ms. Mori told us about their special roses. They taught me some important things in life. One of them is that any place can be home. I love my school life here, but I'll do my best in Sydney. And I can't find words to thank Teo. He always encourages me to be positive and look forward to the future. We'll be far from each other, but we'll continue our  like Ms. Okita and Ms. Mori.

〔問 6〕 本文の内容と合っているものを、次のア～オの中から一つ選べ。

ア Teo is a high school student who came alone from Singapore to be a soccer player in Japan and is staying with Mayu's family.

イ In horticultural therapy, patients must stay quiet in bed and take medicine made from plants grown in hospital gardens.

ウ Mayu wants to study art at college to get a job at a museum, but Teo isn't interested in anything special and can't say what he wants to do in the future.

エ Teo noticed that Mayu was different from usual when she made some mistakes, but Ms. Okita thought she was cheerful as usual at that time.

オ "MOONLIGHT" and "SUNRISE" are special roses to Ms. Okita and Ms. Mori because those flowers were planted and named for them by their teacher.

このページに問題はありません。

次のページに進みなさい。



3

次の文章を読んで、あとの各問に答えよ。

( \*印の付いている単語・語句には、本文のあとに〔注〕がある。)

Do you use \*social media or write a diary to record events you have experienced? Writing a diary or a blog is a useful way to remember your feelings and experiences. Some people may write about their everyday lives, and others may keep records of events they were excited about. 1

About 1,200 years ago, people of different social classes in Kyoto recorded full bloom dates of cherry blossoms in diaries and official records. From these records, we can see that cherry blossoms were an important part of Japanese culture and a special sign of spring. Some Japanese also wrote about the weather at that time. These dates and weather conditions have become important and valuable \*data that scientists around the world use for research about 2. As the world's temperatures rise, cherry blossoms are blooming earlier and earlier.

Now, let's look at some modern records. Since the early 1950s, the \*Japan Meteorological Agency has recorded the bloom dates of cherry blossoms from Hokkaido to Okinawa. According to their data of cherry blossoms, we can see that the \*average bloom dates are changing. Here's <sup>(3)</sup> a map of Japan with two lines ① and ② that shows these changes. ① connects the places which had April 1 as the average bloom date during the years from 1956 to 1985. ② shows the same date for the years from 1991 to 2020. When the two lines are compared, ② is drawn \*further north than ①. ① runs through the southern part of the main island of Japan, *Honshu*, and ② runs from northern *Kanto* to the western part of *Hokuriku*.

The U.S. is another country which has kept valuable records of different flowers and animals for a long time. A group of researchers found that the first bloom dates of \*spring beauties in the \*Rocky Mountains from 2016 to 2021 were about three weeks earlier than those from 1975 to 1980. In addition, they found that some birds and bees these days come to the Rocky Mountains earlier than before. The researchers started collecting these data without realizing that they would be so useful in the future. However, their data, together with the records of temperatures and the amount of snow, have become very valuable because they show the \*relationship between living things and the climate. Their information has become the \*foundational text of the field \*phenology.

Phenology \*deals with how plants and animals are affected by the changes of the seasons. It is becoming more important because it gives us a 4-a to see the \*effects of climate change on \*ecosystems and human societies. In other words, studying phenology

holds the 4-b to understanding how global warming is affecting nature. Now, researchers around the world are trying hard to record the lives of plants and animals, such as the dates of changes in blossoms, leaves, bird songs, and so on. If temperatures are higher than \*usual, flowers bloom earlier and they may be gone before the birds and bees arrive for food. If the \*timing is different, it may affect the 4-c among species and cause serious problems.

Phenology needs years of data of living things from around the world. However, many countries do not have enough data for research yet. In addition, plants and animals are connected to each other. Researchers need to study relationships to see what is really happening, but the areas they need to cover are huge. Researchers also face problems with money. They need money to keep doing their research on various species, but not all of these researchers have enough.

To solve these problems, researchers in Japan, Europe, and North America have asked \*citizen scientists to help them with their research. They are not professional scientists, but they can report what they see in their areas. Many \*organizations have made lists of plants and animals that they want local people to find and report. \*Dandelions and \*cabbage butterflies are two of these examples in Japan. Anyone can take pictures of flowers, birds, and animals with their smartphone as a volunteer and send them to the organizations. These reports may be useful 1,200 years later, just as the records of people in the old days of Kyoto have become precious to the world now.

|                             |           |                   |                        |
|-----------------------------|-----------|-------------------|------------------------|
| 〔注〕 social media            | ソーシャルメディア | data              | データ                    |
| Japan Meteorological Agency | 気象庁       | average           | 平均的な                   |
| further                     | さらに       | spring beauty     | スプリングビューティー(春を告げる花の名前) |
| Rocky Mountains             | ロッキー山脈    | relationship      | 関係性                    |
| foundational text           | 教本        | phenology         | 季節学                    |
| deal with ~                 | ~を扱う      | effect            | 影響                     |
| ecosystem                   | 生態系       | usual             | 普段の                    |
| timing                      | タイミング     | citizen scientist | 市民科学者                  |
| organization                | 組織        | dandelion         | タンポポ                   |
| cabbage butterfly           | モンシロチョウ   |                   |                        |

〔問1〕 本文の流れに合うように、1 の中に英文を入れるとき、最も適切なものは、次のうちではどれか。

- ア Social media and diaries were used to report events 1,200 years ago.
- イ Sometimes, these records can produce amazing results.
- ウ These diaries or blogs can often affect local temperatures.
- エ The records of events were only created by famous writers.

〔問2〕 本文の流れに合うように、2 の中に英語を入れるとき、最も適切なものは、次のうちではどれか。

- ア water pollution
- イ clean energy
- ウ climate change
- エ air pollution

〔問3〕 a map of Japan with two lines ① and ② とあるが、それを描いたものとして最も適切なものは、次のうちではどれか。

ア



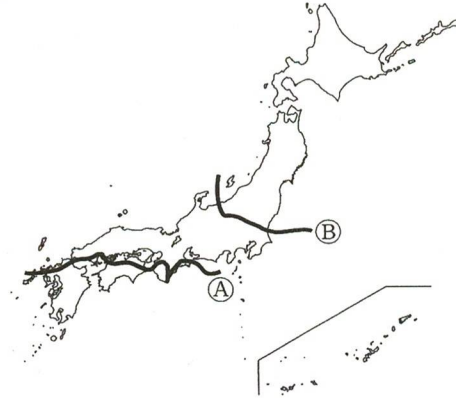
イ



ウ



エ





〔問 4〕 4-a ～ 4-c のそれぞれに入るものの組み合わせとして最も適切なものを、次のア～カの中から一つ選べ。

|   | 4-a      | 4-b    | 4-c        |
|---|----------|--------|------------|
| ア | space    | energy | difference |
| イ | space    | key    | period     |
| ウ | solution | door   | difference |
| エ | solution | energy | balance    |
| オ | window   | key    | balance    |
| カ | window   | door   | period     |

〔問 5〕 phenology を研究する際の問題点として述べられているものは、次のうちではどれか。

- ア Researchers are only interested in collecting plants and animals near their areas.
- イ Researchers have used a lot of money to pay citizen scientists, so they don't have enough money now.
- ウ Many organizations haven't made lists of plants and animals for local people to report.
- エ Researchers in many countries haven't collected enough data of plants and animals for their research.

〔問 6〕 本文の内容と合っているものを、次のア～オの中から一つ選べ。

- ア Recording events needs time and support, but the records can be useful to understand different problems.
- イ The records in the old days of Kyoto are not used for research because they cannot be trusted.
- ウ The records of the first bloom dates of spring flowers are not studied outside Japan.
- エ The researchers in the U.S. knew from the start that their data would be used to study phenology.
- オ Citizen scientists are professional researchers who have special skills to collect various species.

## 4

次の文章を読んで、あとの各問に答えよ。

(\*印の付いている単語・語句には、本文のあとに〔注〕がある。)

During the spring break of my first year in high school, my parents and I visited \*Bali to meet my aunt. I was looking forward to seeing both my aunt and my friend, Wayan. He lived next door to her.

“Hi, Wayan. How are you?”

“Hi, Ren. I'm great! It's been three years since you last came from Japan. How are you?”

“Great! You are a \*senior in high school, right?”

“Yes. So, I'm preparing for my graduation project.”

“Graduation project?”

“Yes. In my high school, we study subjects like math and English. We can also choose ones we are interested in. As seniors, we give presentations about the topics we choose. It's fun because we can learn about something new and experience various things through the projects. Do you want to come and see our school?”

“Yes. That will be great!”

The next day, Wayan and I went to his school by the school bus. I was surprised to learn that it uses used cooking oil. The students collect the oil. The school bus is eco-friendly because it reduces waste and pollution. When we arrived at Wayan's  
(1) school, I found it was in a forest. I was excited to see a river and cows there. I heard the (2) singing of birds and the sound of the river. The school was surrounded by nature. The school buildings and the gym were made of \*bamboo. There were no walls in the classrooms. The design of the buildings allowed the wind to flow freely through the space, and it was cool there. So, air conditioners were not necessary though it was hot in Bali \*all year round. Clean energy like \*solar power produced all the electricity in the school. The school was trying to do a lot of good things for the environment.

“Wow! I've never seen bamboo buildings.”

“Bamboo is strong and \*flexible, and it's one of the fastest-growing plants in the world. Bamboo is light, easy to cut, and doesn't break easily. It \*fits in the nearby \*scenery. Also, bamboo is good for the environment because it takes in \*carbon dioxide.”

When I \*observed the class Wayan attended, the students were working in groups on their graduation projects. In the classroom, I saw not only students but also many adults such as parents or people with special skills. They came from the local area and abroad. They supported the students and shared opinions with them.



“Wayan, I’m surprised that both the students and the adults are working together.”

“We 【 ① who ② with ③ our goals ④ help ⑤ working ⑥ people ⑦ are ⑧ realize  
(3) ⑨ us 】. I don’t think our activities will be successful without their understanding and support.”

Three students including Wayan created a \*model of the bridge first. Then they worked on their graduation project to build an \*arched bridge across the river. They decided to use bamboo because it had some good features.

Wayan said, “Each of us has a <sup>(4)</sup>\*task. I’m designing the low arched bridge by studying math and science. Another student is \*measuring how long and wide the bridge needs to be. He is doing many experiments and trying to find out how strong the bridge must be, too. The third student is going to select the bamboo, so he is visiting people who use bamboo to make things.” They learned it is important to improve \*durability by burning the \*surface oil. They also found it was very difficult to collect bamboo of the same size, and to explain the goal \*clearly to get good advice from adults. Wayan said that he tried many things through his research and learned many things through his mistakes. Like Wayan, all the students I met here looked happy.

5 makes a person \*responsible. If even one person doesn’t work, it is impossible to finish the project. Wayan and his friends communicated and worked together well to make the bridge. However, they sometimes had different ideas. So, they discussed what they should do and put their ideas together to find the best way to work on their project.

“Wayan, your graduation project is amazing! You’re doing most of your work by yourselves and trying to protect the environment. I promise to come back to see your bridge!”

〔注〕 Bali インドネシア南部にあるバリ島

bamboo 竹

solar 太陽の

fit in ～ ～に合う

carbon dioxide 二酸化炭素

model 模型

task 役割

durability 耐久性

clearly 明確に

senior 最上級生

all year round 一年中

flexible 柔軟性がある

scenery 景観

observe 見学する

arched アーチ形に曲がった

measure 測る

surface 表面

responsible 責任感がある

〔問 1〕 eco-friendly とあるが、本文の流れに合うように、別の言葉で言いかえるとき、最も適切な  
(1)  
連続する 4 語を本文中からそのまま抜き出せ。

〔問 2〕 Wayan's school とあるが、それについて述べたものとして最も適切なものは、次のうち  
(2)  
ではどれか。

ア The school did not use air conditioners because it had special walls to keep it cool.

イ The school bus uses used cooking oil to protect the environment.

ウ Some lights used electricity created by clean energy, and others didn't.

エ Adults gave the students the topics of the graduation projects and worked together with them.

〔問 3〕 We 【 ① who ② with ③ our goals ④ help ⑤ working ⑥ people ⑦ are  
(3)  
⑧ realize ⑨ us 】. とあるが、本文の流れに合うように、【     】内の単語・語句を正しく  
並べかえたとき、【     】内で 1 番目と 5 番目と 8 番目にくるものの組み合わせとして  
最も適切なものを、次のア～カの中から一つ選べ。

|   | 1 番目 | 5 番目 | 8 番目 |
|---|------|------|------|
| ア | ④    | ⑤    | ⑧    |
| イ | ④    | ⑧    | ⑦    |
| ウ | ④    | ⑨    | ②    |
| エ | ⑦    | ①    | ⑧    |
| オ | ⑦    | ④    | ②    |
| カ | ⑦    | ⑨    | ③    |

〔問 4〕 some good features とあるが、その具体的な内容として、本文中で述べられていない  
(4)  
ものは、次のうちではどれか。

ア Bamboo is heavy and doesn't burn easily.

イ Bamboo is useful to reduce carbon dioxide.

ウ Bamboo lasts longer when its surface oil is burned.

エ Bamboo grows faster than most other plants.

〔問5〕 本文の流れに合うように、5 の中に英語を入れるとき、最も適切なものは、次のうちではどれか。

- ア Trying a new thing alone
- イ Getting a lot of experience
- ウ Making small mistakes
- エ Doing a task with others

〔問6〕 本文の内容と合っているものを、次のア～オの中から一つ選べ。

- ア Ren went to Bali alone to meet his aunt and his friend, Wayan, for the first time in three years after they met in Japan.
- イ Wayan and three students made one group and worked on the graduation project to make the arched bridge over the river.
- ウ Wayan and his friends made the plan to build a bridge through their own experiences and finished it without the support of adults.
- エ Adults made a model of the bridge and told the students what kind of bridge would fit in the surrounding scenery the best.
- オ Wayan and his friends continued to work together well on their project even when they had different opinions.

〔問7〕 Wayan の学校の生徒たちのように、自分たちで何かを作るとしたら、あなたは何を作るか。その内容と理由について、あなた自身の言葉を用いて、35 語以上 45 語以内の英文で書け。

二つ以上の英文になっても構わない。次の〔例〕のように、「,」「.」などは語数に含めない。短縮形は1語と数える。

〔例〕 Hello, I'm Jane. Nice to meet you.