

# 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、 から  までで、2 ページから  
13 ページまであります。

- 2 次の対話の文章を読んで、あとの各問に答えなさい。  
(\*印の付いている単語・語句には、本文のあとに〔注〕がある。)

*Jeff is a high school student from New Zealand. At Christmas time, Emi and Keita, his classmates, are showing Jeff around Tokyo. First they visit Harajuku.*

- Jeff:* Wow! They are very beautiful. A lot of colorful lights look like flowers.
- Emi:* Yes, they really do. Trees and buildings are covered with a lot of lights. Beautiful \*illumination makes us happy. Do you like it?
- Jeff:* Yes, I think these lights are a kind of art. I've never seen such a beautiful illumination. But is Tokyo always so bright even in the evening? <sup>(1)</sup>That's very different from my hometown in New Zealand.
- Keita:* Christmas time is special. This season, colorful illumination can be seen in many places in Japan.
- Jeff:* Well, in my country, we also celebrate Christmas by putting lights on our houses and tall buildings. But usually most lights on the streets are turned off at night. And there are few shops and restaurants which are open all night. I wonder how many lights are used for this illumination. It will need much energy, won't it?
- Emi:* Yes, maybe, but I don't know much about it. We know we have to save electricity, but these days I'm sorry to say that some of us aren't caring about that.
- Keita:*  Many people are trying to find better ways to save more energy. In fact, scientists have developed various new technologies to save electricity. Do you know these lights used for illumination are all \*LEDs?
- Jeff:* Oh, those are LEDs! I've heard the news about them on TV. They say the LED is one of the greatest new technologies in light.
- Emi:* I know that, too. The other day, my father changed the \*incandescent bulbs in the living room to LED lamps. He says they keep longer and use less electricity.
- Keita:* Yes, an LED lamp can have a \*lifespan of about 40,000 hours or more. It's over 25 times longer than the lifespan of an incandescent bulb. It can keep about 20 years! LED lights are getting more and more popular these days because of their longer life and good \*energy efficiency. They are now used in many areas such as televisions, computers, and traffic lights. They can be used even to grow plants.
- Jeff:*  I've become interested in how LEDs work.
- Keita:* Then, why don't we go and ask our science teacher for more information about it?
- Jeff and Emi:* Yes, let's.

*Next day, Jeff, Emi and Keita visit Mr.Nakata, their science teacher.*

*Keita:* Good morning, Mr. Nakata. May we come in?

*Mr.Nakata:* Oh, welcome. What's up?

*Keita:* We enjoyed illumination in Harajuku, and got interested in LEDs. Could you explain them to us? How are LED lights different from other light bulbs?

*Mr.Nakata:* OK. First, "LED" means "Light-Emitting Diode". It is a \*semiconductor device that \*emits light when \*electric current goes through it. As you know, incandescent bulbs emit light by \*heating a \*metal filament inside them, so they need much electricity and become very hot. \*Fluorescent lamps have \*mercury inside them and emit light by producing \*ultraviolet light. Both of them have some bad \*effects on the environment. But LEDs are very different from other lights.

*Emi:* You mean LEDs emit light (3) heating something or producing ultraviolet light. Then how do LEDs work?

*Mr.Nakata:* LEDs emit light by the movement of \*electrons in a semiconductor. When electricity goes through a diode, electrons in it become active and hit each other, and they produce energy called \*photons. We see them as light. The color of light depends on the energy of the photon and the kind of the semiconductor. LEDs can \*directly change the energy of electrons into light, so they need little electricity. Look at this list which compares an LED lamp with other bulbs. In fact, it uses about 85 % (4)-a energy than an incandescent bulb, and that means it produces (4)-b CO<sub>2</sub>.

#### List

60W相当の 明るさの電球	寿 命 (hour)	消費電力(W) (1時間あたり)	CO <sub>2</sub> 排出量換算値(kg) (1年間3000時間使用想定)
LED電球	40,000	8~10	10.8
電球型蛍光灯	6,000~10,000	12~13	14.4
白熱電球	1,500	54	64.8

※数値は一般市販品平均値

*Jeff:* Oh, LEDs are friendlier for the environment. Are LEDs popular in other countries?

*Mr.Nakata:* Of course. In fact, to stop global warming, many countries in Europe and the United States have already stopped making and selling incandescent bulbs and are beginning to change most of the lights to LEDs. In New York City, 250,000 street lights will be changed to LED lights by 2017. They tried LEDs in some streets and parks and have found that they can reduce greenhouse gasses in the air by 30 %.

*Keita:* LEDs sound perfect. They can \*solve many problems about energy and the environment, can't they?

*Mr.Nakata:* Wait a minute. <sup>(5)</sup>Technologies are not perfect. Some doctors are pointing out that blue light emitted from computers or smartphones has very strong energy, so it may have some bad effects on our health. We have to study more about LEDs and know the best way to use them.

*Jeff:* I see your point. Anyway, <sup>(6)</sup>I think it is [ ① much energy ② important ③ more ④ as ⑤ for each ⑥ to save ⑦ of us ⑧ to try ] as we can. In my country, people are very active to save electricity. We believe protecting the natural environment should come first. Actually about 75 % of electricity in New Zealand is produced from natural energy, such as wind power or water power. We are trying to raise the number up to 90 % by 2025.

*Emi:*  In Japan, the number is about 10 %. We should think what else we can do to save energy in our everyday lives.

*Jeff:* My father has told me about the German way of life before. They are very strict in saving energy. They don't use electric lights during the day. Many German people think sunlight is very important and try to use natural light well in their lives. So they have many good ideas to collect sunlight inside a room.

*Keita:* I read about Earth Hour in a newspaper yesterday. The newspaper says that it is a lights-off event. \*The World Wide Fund for Nature started the movement for the earth. In the movement, people turn off the lights in their cities for one hour, from 8:30 p.m. to 9:30 p.m. on the last Saturday in March. It started in Australia in 2007, and more than 7,000 cities in 162 countries in the world joined the event in 2014.

*Emi:* It's a wonderful event! <sup>(7)</sup>By the same action, they have the same feelings to stop global warming. I think it's very important to take action in our everyday lives.

*Mr.Nakata:*  Technology makes our lives convenient and it's a good thing. But we should think how we use it to protect our earth. I think we may have a hard time without technology, but <sup>(8)</sup>it's sometimes necessary.

〔注〕 illumination	イルミネーション	
LED (Light-Emitting Diode)	発光ダイオード	
incandescent bulb	白熱電球	lifespan 寿命
energy efficiency	エネルギー効率	
semiconductor device	半導体を使った電子素子	emit 発する
electric current	電流	heat 熱する
metal filament	金属製のフィラメント (電気を通すと白熱する線条)	
fluorescent lamp	蛍光灯	mercury 水銀
ultraviolet light	紫外線	effect 影響
electron	電子	photon 光子
directly	直接	solve 解決する
The World Wide Fund for Nature	世界自然保護基金	

〔問1〕 (1) That's very different from my hometown in New Zealand. とあるが、その内容を具体的に表しているものは次のうちではどれか。

- ア In New Zealand, the streets are covered with more colorful illumination.
- イ In New Zealand, people don't enjoy illumination at Christmas time.
- ウ In New Zealand, people don't see so many lights on the streets at night.
- エ In New Zealand, so many shops and restaurants are not open at Christmas time.

〔問2〕 (2)-a ~ (2)-d の中に、それぞれ次のA~Dのどれを入れるのがよいか。その組み合わせが最も適切なものは下のア~カの中ではどれか。

- A Oh, that's so high!
- B I don't think so.
- C That's the point.
- D I see they have many good points.

ア	(2)-a	A	(2)-b	B	(2)-c	D	(2)-d	C
イ	(2)-a	B	(2)-b	D	(2)-c	A	(2)-d	C
ウ	(2)-a	B	(2)-b	C	(2)-c	A	(2)-d	D
エ	(2)-a	C	(2)-b	A	(2)-c	D	(2)-d	B
オ	(2)-a	C	(2)-b	D	(2)-c	A	(2)-d	B
カ	(2)-a	D	(2)-b	A	(2)-c	B	(2)-d	C

〔問3〕 本文の流れに合うように、の中に適切な英語1語を入れなさい。

〔問4〕 本文の流れに合うように、, の中に共通の英語1語を入れなさい。

〔問5〕 (5) Technologies are not perfect. とあるが、その具体的な内容を35字以上45字以内の日本語で説明しなさい。ただし、「,」「。」などもそれぞれ1字と数えなさい。

〔問6〕 (6) I think it is 【① much energy ② important ③ more ④ as ⑤ for each ⑥ to save ⑦ of us ⑧ to try】 as we can の【】内の語(句)を、本文の流れに合うように正しく並べ替えたとき、3番目と5番目と7番目にくるものの組み合わせとして最も適切なものは次のア～カの中ではどれか。

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

〔問7〕 (7) By the same action とあるが、その内容を次のように書き表すとすれば、の中にどのような英語を入れるのがよいか。7語で書きなさい。

A lot of people around the world  time in their cities.

〔問8〕 (8) it's sometimes necessary とあるが、その内容を次のように語句を補って書き表すとすれば、の中に下のどれを入れるのがよいか。

it's sometimes necessary

- ア to stop global warming
- イ to make our lives more convenient
- ウ to live without technology
- エ to develop better technology

〔問9〕 本文の内容に沿って、次の質問の答えとなるように の中に適切な英語を10語以内で書きなさい。

〔質問〕 Why do LED lamps have good energy efficiency?

〔答え〕 Because .

〔問 10〕 本文の内容と合っているものを、次のア～オの中から一つ選びなさい。

- ア Emi likes to see illumination and knows well how much electricity is used for it.
- イ Fluorescent lamps are bad for the environment, so many countries in Europe have stopped making and selling them.
- ウ New Zealand produces much of its electricity from natural energy to protect the environment.
- エ In New York City, people were able to reduce greenhouse gasses because they changed all the street lights to LEDs.
- オ German people think sunlight is very important in their lives and are trying to produce much of their electricity from sunlight.

このページには問題はありません。

次のページに進みなさい。



3

次の文章を読んで、あとの各問に答えなさい。

( \* 印の付いている単語・語句には、本文のあとに〔注〕がある。)

Becky was nine years old. Her brother Bob was seventeen. They lived with Mom and Dad in a city in \*California.

Becky did not like baseball at first, but Bob did. He took her to a professional baseball game one day, and she suddenly became interested. Actually, she was interested in one player. When she came home with Bob from the baseball game, she said to Mom, “I have become a big fan of Andy Smith!”

“Oh, what do you like about him? You like him because he’s a star player?” asked Mom. Becky just smiled, so Bob answered, “He actually is, but that’s not the reason.”

“Because he’s \*good-looking?” said Mom.

“No, that’s not the reason, either,” answered Bob again. Mom looked at Becky and said, “Tell me, Becky. Why do you like him?”

“Because he was very nice to me!” said Becky. “Mom, you know, fans are very excited when players sometimes throw balls to them. He threw one to Bob.”

“He did? I can’t believe it!” said Mom.

“I couldn’t believe it, either. I was too excited to catch it,” said Bob.

“Right. Bob couldn’t catch it. It hit me on the head \*instead,” added Becky.

“Oh, no! Were you OK?” asked Mom.

“Yes, she was,” said Bob, “but Andy worried about her. He came over to us.” Bob added, “Andy asked her about her head. He did not want to leave until she finally said that she was OK.”

“He’s nice, isn’t he?” said Becky, and Mom answered yes.

After that, Becky often asked Bob to take her to the stadium. When she was there, she held up a big sign for Andy. It said, “Hi, ANDY!” But Andy did not \*respond. The next week her sign said, “I Love You, ANDY!” Still, Andy did not respond. When Becky went there the next time, Andy responded to her sign. It said, (2)-a When Andy saw it, he suddenly began to laugh. Becky was happy because he remembered what happened between them.

That night Becky was excited and said to Bob, “What sign should I write next? I want Andy to laugh again.”

Bob said she should write (2)-b “The message is very funny because you’re only nine,” Bob said.

“That’s a good idea! I can’t wait until Saturday!” said Becky.

Bob said, “Oh, next Saturday I can’t take you to the game. I have something else to do.”

Bob did not play baseball. He was a \*pole-vaulter. When he jumped in an event, all of his family members always went to see his performance.

“Oh, yes! We’ll all be there. Good luck, Bob!” said Becky.

“Thanks. And on Sunday we can go to see your friend,” said Bob, and Becky gave him a big smile.

But the friendship ended suddenly. One day in July Andy Smith was \*traded to a team in \*Detroit. Becky felt that he was not nice to leave without telling her. He was born and grew up in her city, and he was their local hero. Detroit was too far away for her brother to take her to see a game. Becky was sad, very sad. But she didn't say she was. She said she was angry. She said to herself, "I don't like him any more. I \*hate him. I don't like baseball."

That night Dad came home and heard about the news. He said, "Bob, I hope you will do well on Saturday. And on Sunday, <sup>(3)</sup> take / like / you / to / you / to / would / me Detroit by plane to see Andy Smith on his new team?"

"Wow! That's great! Thanks, Dad!" said Bob. But Becky said, "I'll stay home. I'm not interested in him any more." She looked angry. She went to her room.

Later that night Becky went to Bob and said, "I'll stay home. When you go to see Andy with Dad, show this to him." She handed a big sign to Bob.

It said,

The next Saturday Bob was in a national track and field event for high school students. Mom, Dad and Becky were in the stadium.

Becky saw that Bob was performing better than ever before. He was in the \*final for the first time. She believed that Bob could win, but she noticed something different about him. He was nervous. Bob was never nervous in her memory. He was always \*confident.

Bob carefully picked up his \*pole. All Becky could do was to \*pray. Mom \*whispered, "Take a deep breath, Bob." Becky wanted Bob to hear it. Becky said to herself, "

But when Becky was just going to do so, Bob began to run. Everything was moving in \*slow motion. Bob was flying. She said to herself, "He can fly over the bar. He can fly over anything."

But he couldn't. She couldn't believe it.

Bob finished in second place. Becky knew that he was not sorry about the \*result. She knew what he was sorry about. She said to herself, "He was nervous. He could not jump because he was nervous."

Later at home Becky said to Mom, "You were saying in a low voice that Bob should take a deep breath. I thought that Bob wouldn't be able to hear you. I thought I should shout it to him, but I didn't. I thought that he could not jump because of me."

Mom said, "Oh, no, I don't think so, Becky. I always tell Bob to relax, and to take a deep breath. He knows that he should, but he just couldn't. That was not your \*fault. But at the same time, shouting to him is a good idea, because . People need someone who will stand by them. When they have someone, they feel more confident."

Becky understood what Mom meant. Becky thought that she should shout to her brother to relax the next time. Or maybe she would write a sign, "Take a deep breath, Bob!"

Suddenly, Becky thought about someone else. Someone who was thrown in a new situation. Someone who was very nervous about it. He needed someone who would stand by him. Andy

Smith was a local hero, and he was not playing well after he was traded to a new team in Detroit. "I'm sure he's nervous," she said to herself, "I'll have to go to Detroit to \*encourage him."

The next morning Becky said, "Dad, can you take me to Detroit?" In her hand there was a big sign. It said,  (2)-d

- 〔注〕 California カリフォルニア州 (米国西部の州)  
 good-looking 顔立ちのよい instead 代わりに  
 respond 反応する pole-vaulter 棒高跳びの選手  
 trade 他のチームへ移籍させる  
 Detroit デトロイト市 (米国北部ミシガン州の都市) hate 嫌う  
 final 決勝 confident 自信をもった pole 棒  
 pray 祈る whisper ささやく  
 slow motion スローモーション result 結果  
 fault 責任 encourage 励ます

〔問1〕 <sup>(1)</sup> He actually is とあるが、この文を次のように書き表すとき、 の中にどのような英語 3 語を入れるのがよいか。

He is actually

〔問2〕  (2)-a ~  (2)-d の中にそれぞれ次の A ~ D のどれを入れるのがよいか。その組み合わせが最も適切なものは下のア ~ カの中ではどれか。

- A "Becky HATES you!"
- B "Take a deep breath, ANDY!"
- C "My HEAD is OK, but my HEART hurts!"
- D "Marry me, ANDY!"

- |   |                            |   |                            |   |                            |   |                            |   |
|---|----------------------------|---|----------------------------|---|----------------------------|---|----------------------------|---|
| ア | <input type="text"/> (2)-a | A | <input type="text"/> (2)-b | C | <input type="text"/> (2)-c | D | <input type="text"/> (2)-d | B |
| イ | <input type="text"/> (2)-a | A | <input type="text"/> (2)-b | D | <input type="text"/> (2)-c | C | <input type="text"/> (2)-d | B |
| ウ | <input type="text"/> (2)-a | C | <input type="text"/> (2)-b | D | <input type="text"/> (2)-c | A | <input type="text"/> (2)-d | B |
| エ | <input type="text"/> (2)-a | C | <input type="text"/> (2)-b | D | <input type="text"/> (2)-c | B | <input type="text"/> (2)-d | A |
| オ | <input type="text"/> (2)-a | D | <input type="text"/> (2)-b | C | <input type="text"/> (2)-c | A | <input type="text"/> (2)-d | B |
| カ | <input type="text"/> (2)-a | D | <input type="text"/> (2)-b | C | <input type="text"/> (2)-c | B | <input type="text"/> (2)-d | A |

〔問3〕 (3) 【 take / like / you / to / you / to / would / me 】 とあるが、本文の流れに合うように、【                      】内の語を正しく並べかえて英文を完成しなさい。

〔問4〕 本文の流れに合うように、 に英語を入れるとき、最も適切な文は次の中ではどれか。

- ア Should I shout to Bob and tell him to take a deep breath?
- イ I'm sorry that I didn't make a sign for Bob.
- ウ Mom should shout to Bob and tell him to take a deep breath.
- エ Bob doesn't have to take a deep breath because he's performing well.

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

- ア he wants to practice more
- イ he wants to win more games
- ウ he will understand that you are there
- エ he will understand that he does not need help

〔問6〕 本文の内容と合っているものを、次のア～クの中から二つ選びなさい。

- ア Becky was interested in baseball very much, and she liked it much more after Bob took her to the baseball game.
- イ Andy threw the ball to Bob in the stadium, but Bob was so excited that he could not catch it.
- ウ The ball hit Becky's head, and Andy found that she was all right, so he went back to play without saying anything.
- エ When Becky held up her sign for the first time, Andy responded to her, so she made many signs after that.
- オ Bob was not only a good baseball player but also a good pole-vaulter, and he was often in both sports events.
- カ One Sunday Bob was in his event, but Becky wanted to watch a baseball game, and was in the baseball stadium.
- キ Mom whispered, "Take a deep breath," and Bob heard her voice, so he did his best in his sports event.
- ク Becky was not happy after Andy left the local baseball team, but she thought she finally knew Andy's situation after talking with Mom about Bob's performance.

〔問7〕 次の質問に対する答えを、40語以上50語程度の英語で答えなさい。「.」「,」「!」「?」などは、語数に含めません。これらの符号は、解答用紙の下線部と下線部の間に入れなさい。

How can you make someone happy?

