

問 8 次の英文を読んで、あとの(ア)～(ウ)の問いに答えなさい。

*Josh is a high school student from *New Zealand. He went around Tokyo with Kaori and Shota on the weekend.*

Josh : Thank you for showing me around Tokyo yesterday. I enjoyed it very much.

Kaori : Oh, you're welcome, Josh. I had a good time, too.

Shota : The *illuminations along the streets were so beautiful, right? Josh, you told me that people in New Zealand try to *save *energy in *various ways. I want to know more about it.

Josh : Why don't we talk to Ms. Kato? She is a science teacher, so we can ask her some questions.

Kaori : That's a great idea.

After school that day, Josh, Kaori and Shota visit Ms. Kato, their science teacher.

Kaori : Hello, Ms. Kato, may we come in?

Ms. Kato : Of course. What can I do for you?

Josh : We went to Tokyo yesterday and saw beautiful illuminations. We enjoyed them very much, but we started thinking about the energy problem *at the same time.

Shota : I heard that ① *LED *lights are used for most illuminations today. Is that right?

Ms. Kato : That's right. LED lights are *probably one of the best *inventions. They use much *less *electricity than *incandescent light bulbs. They also keep longer.

Josh : How do LED lights *work?

Ms. Kato : OK, LED means Light-Emitting Diode. LED *emits light when an *electric current goes through it. *On the other hand, incandescent light bulbs emit light by *heating a *metal filament *inside them. They need much more electricity *because of that.

Kaori : I see. Now *I know why they become so hot.

Ms. Kato : You are right, Kaori. Do you know *fluorescent lamps? They have *mercury inside them, and they emit light by *producing *ultraviolet light.

Shota : Aren't mercury and ultraviolet light good for us?

Josh : They are *not good for the *environment, either.

Kaori : I agree. So LEDs are better than other kinds of light because they use less electricity. That's good for the earth, right?

Shota : I can't think of a *reason not to use LEDs.

Ms. Kato : Well, the *price of LED bulbs is higher than the other bulbs. Some people don't want to change to LED bulbs because of that reason. But more people are using LEDs than before. Look at ② the *graph. What can you find?

Shota : *It doesn't look like LED bulbs were popular in 2006 and 2007.

- Kaori :** Many people started using LED lights in 2010. Also, after March 2011. Why?
- Ms. Kato :** LED lights started becoming more popular *as the price became *lower around 2009. But the big *earthquake in Tohoku in 2011 changed the people's ways of thinking.
- Kaori :** Of course! People needed more electricity, but there was already a *movement to save energy in the world then. LEDs were good for *both.
- Josh :** In New Zealand, about 80% of electricity *is produced from *natural energy like *wind power or *water power.
- Shota :** Wow, that's amazing! I think the number is about 23% in Japan. I hope more people will use LED bulbs. Now we have to think of other ways to save energy for the environment in Japan.
- Josh :** My father told me about a way to save energy in *Germany. They try to use natural light. They have many great ideas on *how to get *sunlight inside the house.
- Shota :** I read about Earth Hour on the newspaper last week. People *turn off the lights in their cities for an hour. The *article said more than 7,000 cities in 162 countries joined the event in 2014.
- Kaori :** Can we talk about ③this in the next science class, Ms. Kato? I want to think about ideas to save energy with everyone in the class.
- Ms. Kato :** Sounds like a great idea!

* *New Zealand* : ニューゼーランド illuminations : イルミネーション・電飾

save ~ : ~を節約する energy : エネルギー various : さまざまな

at the same time : 同時に LED (Light-Emitting Diode) : 発光ダイオード

lights : 光, 明かり probably : おそらく inventions : 発明 less : より少ない

electricity : 電気 incandescent light bulbs : 白熱電球 work : 機能する

emits ~ : ~を発する electric current : 電流 On the other hand : 一方で, それに対して

heating ~ : ~を熱すること metal filament : 金属フィラメント inside ~ : ~の中の

because of ~ : ~の理由で I know why ~ : なぜ~かわかる fluorescent lamps : 蛍光灯

mercury : 水銀 producing ~ : ~を作り出すこと ultraviolet light : 紫外線

not ~, either : ...も~ない environment : 環境 reason not to ~ : ~しない理由

price : 値段 graph : グラフ It doesn't look like ~ : ~とは思われない

as ~ : ~につれて lower : より安い earthquake : 地震 movement : 動き

both : 両方 is produced : 作られている natural : 自然の wind power : 風力

water power : 水力 Germany : ドイツ how to ~ : どのように~したらよいか

sunlight : 日光 turn off ~ : ~を消す article : 記事

(ア) 本文中の — 線①と — 線②が表す内容を、①はア群、②はイ群の中からそれぞれ選んだときの組み合わせとして最も適するものを、あとの1～6の中から一つ選び、その番号を答えなさい。

ア群

A.

- ・ They are good for the earth.
- ・ The price of them is higher than the other bulbs.
- ・ They need much electricity.

B.

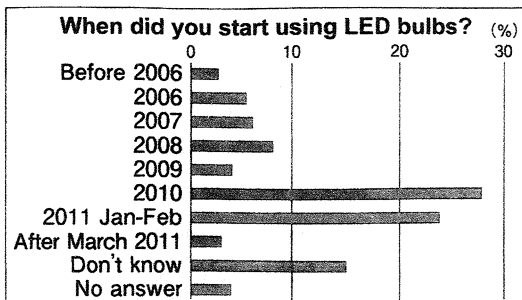
- ・ They are good for the earth.
- ・ They emit light by heating a part of them.
- ・ They have mercury and produce ultraviolet light.

C.

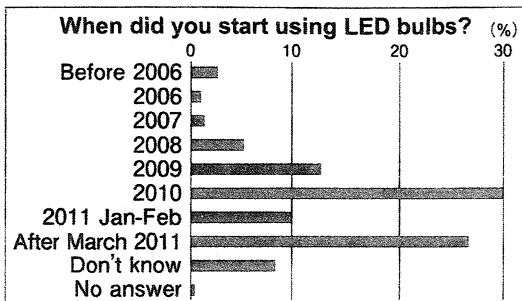
- ・ They are good for the earth.
- ・ They use less electricity than the other bulbs.
- ・ The price of them is higher than the other bulbs.

イ群

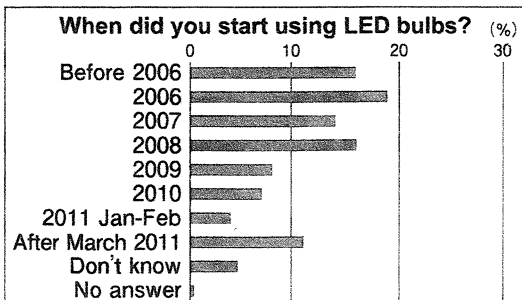
X.



Y.



Z.



- | | |
|----------|-------|
| 1. ① : A | ② : Y |
| 2. ① : A | ② : X |
| 3. ① : B | ② : X |
| 4. ① : B | ② : Z |
| 5. ① : C | ② : Y |
| 6. ① : C | ② : Z |

(イ) 本文中の ― 線③の内容を表したものとして最も適するものを、次の 1～4の中から一つ選び、その番号を答えなさい。

1. Josh says that people in Germany try to use natural light.
2. In New Zealand, people have many ideas on how to get sunlight inside the house.
3. Using LEDs is the best way to save the earth.
4. In an event for the environment, people in many cities around the world turn off the lights for an hour.

(ウ) 次の a～gの中から、本文の内容に合うものを二つ選んだ時の組み合わせとして最も適するものを、あとの 1～8の中から一つ選び、その番号を答えなさい。

- a. People in New Zealand have ideas about saving energy and do good things for the environment.
- b. Josh, Kaori and Shota visited Ms. Kato to talk about the beautiful illuminations of New Zealand.
- c. LED lights are better because they keep longer than incandescent light bulbs.
- d. Many people started using LEDs around 2009 because people changed their ways of thinking.
- e. A movement to save energy in the world began after 2011.
- f. Only 23% of people in Japan use natural energy like wind power or water power.
- g. Kaori wants to think about saving energy with science teachers.

1. a と b

2. a と c

3. b と e

4. b と g

5. c と f

6. c と g

7. d と e

8. d と f