

1 次は、高校1年生の Keita が Light Pollution (光害) という題で行ったスピーチです。これを読んで、問1～問6に答えなさい。*印のついている語句には、本文のあとに〔注〕があります。

Hello, everyone. Last summer I visited Nagano with my family and stayed at a hotel near the Yatsugatake Mountains. During the night, we were very excited to see so many stars in the dark sky. We were able to see *the Milky Way. It was a wonderful experience!

But can we see many stars here in this city? No, we can't. I sometimes look up at the night sky, but I can see only a stars here. At night, the city is too bright to see the stars. I understand that *artificial light at night makes our life active and safe. But do we really need so much light? I don't think so. After coming back from Nagano, I wanted to know [becoming / difficult / is / it / see / the stars / to / why]. I used the Internet to look for more information, and I found the words "light pollution."

*The Ministry of the Environment says light pollution is *hikari-gai* in Japanese. It is *caused by too much artificial light at night. *According to research in 2016, more than thirty percent of people in the world can't see the Milky Way during the night because of light pollution. It also says that about eighty percent of people in North America can't see it, and that the number is about seventy percent for Japan. You may think that losing a dark night sky is not a big problem, but it really is. Actually, light pollution *affects all living things on the earth.

Scientists are studying the *effects of light pollution on animals. *Sea turtles are one example. When sea turtles grow up, they come up to the beach during the night to *lay their eggs. But artificial light makes them of coming up to the beach, so they can't get to the right place. Also, light pollution is a big problem for baby sea turtles. After coming out of their eggs, baby turtles move *toward the sea by following the moon's *reflection on it. But if there are many lights from hotels and streets near the beach, they will move toward those lights, not toward the sea.

Scientists have also found that light pollution has bad effects on humans. Their research shows that artificial light at night *disrupts our *internal clock and makes some people sick and tired. But health is not the only problem for humans. Many kinds of human activities are affected by light pollution too. For many centuries, humans have *developed sciences like *astronomy by watching the stars. However, if there is too much artificial light at night, their work is seriously disrupted. It's sad to think that we may lose these important parts of our culture.

And don't forget the effects of light pollution on global warming. Artificial light needs energy made from *fossil fuels. So if we use more artificial light, more CO₂ will be produced and the earth will become hotter. This will affect all plants and animals on the earth. We should remember that light pollution has become a world environmental problem.

Now we've learned about the effects of light pollution. In some places in Japan, people are trying different things to take back our dark night sky. For example, some high school students in Gunma are working hard to reduce light pollution. About six years ago, they started to study this problem in their club activities. Now they work on a *campaign called "Light Down." In this campaign, the students ask people in their city to turn off the lights at home on one August night. "Let's see the stars in the dark night sky," the campaign poster says. Many people are joining this campaign. These students are as young as we are, but they are doing something important. Isn't that amazing?

They also say that *driverless cars may help because they won't need many street lights. But there is something simple that everyone can do right now. Can you guess? Yes! Turn off the lights when we don't need them. The effects of light pollution won't go away soon, but we can do this very easily. So let's work together!

Do you want a beautiful night sky that is full of stars? I believe that your answer is "Yes!" So just remember: artificial light should only be used when it's necessary. Bright cities at night may look beautiful, but now we should think about the problems they can cause. Thank you.

〔注〕 the Milky Way……天の川
 the Ministry of the Environment……環境省
 according to research……研究によると
 effect……影響
 lay～……～を産む
 reflection……反射光
 internal clock……体内時計
 astronomy……天文学
 campaign……キャンペーン

artificial……人工の
 cause ～……～を引き起こす
 affect ～……～に影響する
 sea turtle……ウミガメ
 toward～……～に向かって
 disrupt～……～を混乱させる
 develop～……～を発展させる
 fossil fuel……化石燃料
 driverless……自動運転の

問1 空欄 , にあてはまる適切な1語を、それぞれ英語で書きなさい。

問2 [] 内のすべての語句を正しい順序に並べかえて書きなさい。

問3 下線部 it really is の it がさすものを、本文中から5語の英語で抜き出して書きなさい。

問4 空欄 ～ にあてはまる最も適切な文を、次のア～エの中から1つずつ選び、その記号を書きなさい。なお、同じ記号を2度以上使うことはありません。

- ア But the more important thing is to think about how to stop it.
- イ Writers, singers, and artists have also been influenced by the beautiful stars in the night sky.
- ウ Then we can use the light of the sun to make clean energy and stop global warming.
- エ Scientists say that light pollution can be reduced if street lights' covers have a better design.

問5 Keita は、スピーチで取り上げた高校生たちが、彼らの取り組むキャンペーンの中でどのようなことをすると述べていますか。日本語で具体的に書きなさい。

問6 本文の内容と合うものを、次のア～カの中から2つ選び、その記号を書きなさい。

- ア Keita saw some stars in Nagano, but he didn't see the Milky Way there.
- イ Research shows that about seventy percent of people in Japan aren't able to see the Milky Way.
- ウ Baby sea turtles can't come out of their eggs if there are too many people near the beach.
- エ Scientists have found that artificial light at night is necessary for both human health and culture.
- オ If people use more artificial light at night, global warming will become worse.
- カ Keita isn't sure that the people listening to him want to take back the dark night sky.

問1	A		
	B		
問2	I wanted to know [<input type="text"/>].		
問3			
問4	①	<input type="text"/>	② <input type="text"/>
	③	<input type="text"/>	<input type="text"/>
問5	<input type="text"/>		
	<input type="text"/>		
	<input type="text"/>		
問6	<input type="text"/>	<input type="text"/>	<input type="text"/>

