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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。)

Since ancient times, people around the world have been interested in space. Some people dreamed of leaving Earth to travel into space. For example, in the 19th century, ⁽¹⁾ a famous writer wrote stories about travel into space. There were other writers who wrote about space before, but the famous writer was different from others because he used science to write about space travel. Now, he is called the “father of science fiction.” Though his stories were fiction, he *influenced two scientists very much, and these scientists tried to *realize space flight.

One of the scientists developed *theories of space flight in the early 20th century, and he influenced later space and *rocket research a lot. Now he is called the “father of space flight.” The other scientist worked hard to make a space rocket by using the theories developed by the “father of space flight” and *succeeded in making the world’s first *liquid *fuel rocket. From 1926 to 1941, he did experiments to send a rocket into space. It flew 2.6 km high at the speed of 885 *km/h. If you compare this with today’s technology, this may not sound surprising, but the liquid fuel rocket he made played an important role to develop rockets later. Now he is called the “father of modern rockets.” However, many people at that time laughed at him when they heard about his experiments. They thought it was impossible to go into space.

Time passed and technology developed, and scientists thought that it was not a dream any more to send a rocket into space. In fact, the first human space flight was made in 1961, and the astronaut traveled around Earth for 108 minutes before coming back *safely.

(2)

By getting help from their countries, scientists in various countries tried to do experiments in no *gravity environments, find *resources in space, and develop the technology of *satellites that would allow people to share information and messages with others around the world more easily.

Though many countries wanted to study space more, it was not easy for them to work in space because the *cost of sending things into space was very high. For example, from about 300,000 to 400,000 yen was necessary to send just a glass of water. To solve this, *non-government companies were allowed to start space businesses, and various companies worked hard to succeed. The companies *competed with each

other, and as a result, the cost of sending things into space became lower than before. Now, many companies are working on various space business projects. For example, one company is planning to build a hotel in space for space travelers. In the hotel, they will be able to stay in a comfortable room because the gravity inside the hotel and the gravity on Earth will be almost the same. This means they will be able to sit and eat food at a table and sleep well on a bed like in a hotel on Earth, and enjoy a view they cannot see on Earth.

To explore space more, there is a plan to use the moon as an important place. Since 1972, humans have not landed on the moon, but NASA is trying to change this situation and develop space technology more by the Artemis Program. The goal of the Artemis Program is to send humans to the moon again and build a base to explore Mars. NASA is thinking about sending humans to Mars by the 2030s and building a city there by 2050. You may not believe humans can live on Mars, but it is said that second to Earth, Mars is comfortable to live on because it has gravity and an atmosphere. In addition, a robot that was sent from Earth to Mars succeeded in collecting CO₂ and creating oxygen from it there. That means it is possible to have oxygen on Mars.

However, it is hard to go to Mars from Earth. Because Earth has strong gravity, a lot of fuel is necessary to go to Mars. Now scientists are thinking about going to Mars from the moon because the moon has weak gravity. In addition, it was found that the moon has various resources, so it is possible to (3) by using the resources found on the moon. While engineers are doing this, they will use less energy because the gravity of the moon is weaker, and they can move things more easily.

In this way, space technology has developed, but there are still some serious problems. One of them is garbage in space. Space garbage includes parts of rockets and satellites that are not used any more. Even a piece of garbage that is as small as a coin travels at the speed of 59,000 km/h. This means the garbage travels faster than a bullet, so if it hits something, like a satellite or a rocket, it will cause a big accident. It is necessary to think about this problem because the amount of space garbage is increasing. However, some people are trying to solve it with unique ideas and high technology. In fact, they succeeded in catching space garbage that moves very fast by using a special magnet. There is also a movement to develop space technology that will produce less garbage.

Humans have been working hard to explore space. Though it was sometimes hard to get over difficulties, they continued their efforts and realized their dreams. The “father of space flight” once said humans would find and use resources in space, and he also thought humans would be able to explore space beyond the moon. At that time,

many people didn't believe him because they thought to go into space was impossible, but many people are thinking about his ideas in a serious way today. There are still things that seem almost impossible to realize, and there are also problems that seem very difficult to get over. However, humans will continue to develop space technology and try to make the "impossible" possible.

【注】 influence 影響を与える	realize 実現する	theory 理論
rocket ロケット	succeed 成功する	liquid 液体の
fuel 燃料	～ km/h 時速～キロ	safely 安全に
gravity 重力	resource 資源	satellite 衛星
cost 費用	non-government 非政府の	compete 競争する
explore 探索する	base 基地	Mars 火星
the 2030s 2030年代	second to ～ ～に次いで	atmosphere 大気
oxygen 酸素	bullet 弾丸	
get over ～ ～を乗り越える		

〔問1〕 下線部 a famous writer ⁽¹⁾ について、本文の内容と一致するものを、次の中から選びなさい。

- ア The famous writer was different from other writers because he wrote about space travel in the 19th century for the first time in history.
- イ Every part of the stories that the famous writer wrote was real, so his stories influenced the two scientists in the 19th century.
- ウ The famous writer wrote about space travel by using the theories of science that were developed by the scientist in the early 20th century.
- エ The stories of space travel that the famous writer wrote influenced the two scientists, and they developed space science in the 20th century.

〔問2〕 次の文を，本文の内容と合うように完成させるとき， の中に入る最も適切なものを，下のア～エの中から選びなさい。

Though space flight wasn't realized in the first half of the 20th century,
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- ア the “father of modern rockets” invented a liquid fuel rocket, and it flew 885 km high in the sky
- イ the liquid fuel rocket that the “father of modern rockets” made helped scientists to develop rockets later
- ウ many people at that time were surprised at the liquid fuel rocket and respected the “father of modern rockets”
- エ the “father of modern rockets” came up with the theories of space flight and did experiments by using those theories

〔問3〕 (2) の中には，次のア～エの英文が入る。本文の流れに合うように正しく並べ，記号で答えなさい。

- ア So, the scientists set a goal to send humans to the moon and bring them back to Earth safely.
- イ Many countries were influenced by these events, and they decided to support scientists who studied space.
- ウ After this successful event, scientists wanted to do more than send a rocket with humans into space.
- エ It sounded like science fiction to many people, but they realized it in 1969, 1971, and 1972.

〔問4〕 次の文を、本文の内容と合うように完成させるとき、 の中に入る最も適切なものを、下のア～エの中から選びなさい。

In space research, the non-government companies .

- ア worked together and competed with many countries, and then the cost of sending things into space became lower
- イ hoped to build a hotel in space for their workers to work in a comfortable condition in space
- ウ were able to start space businesses because their efforts were needed for many countries to study space more
- エ succeeded in sending things into space faster than before, when they started space businesses

〔問5〕 (3) の中に入る最も適切な語句を、次の中から選びなさい。

- ア build a city on Mars for humans to live
- イ create a base on Mars to explore the moon
- ウ go to Mars from Earth more often than before
- エ make rockets on the moon that travel to Mars

〔問6〕 次の質問の答えとして、一致しないものを、下のア～エの中から選びなさい。

What are the technologies introduced in this story?

- ア The technology to make communication all over the world easier.
- イ The technology to change gravity inside a building in space.
- ウ The technology to send the CO₂ of Mars to Earth and create oxygen.
- エ The technology to collect garbage in space with a special magnet.

〔問7〕本文の内容と合うものを，次のア～カの中から二つ選びなさい。

- ア People started to become interested in space when the famous writer wrote stories about travel into space in the 19th century.
- イ Ten years after the experiment in 1941, scientists succeeded in sending a rocket with a human into space, and it traveled around the moon.
- ウ Since humans landed on the moon in 1972, no one has returned there though space technology has developed.
- エ It is said that the moon is more comfortable to live on than Mars, but humans still dream of living on Mars.
- オ It is necessary to think about the small garbage in space that travels very fast though the amount of garbage in space is decreasing.
- カ One scientist thought that humans would be able to go beyond the moon even before humans went into space.

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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。)

It's March 10th today, and tomorrow will be a special day for me. I'm Sachi, and I'm going to graduate from high school tomorrow. Now I'm thinking about my high school days. I've experienced and learned a lot, but among all the things I've done, the last school festival is especially *memorable.

One sunny day in May, I was sitting in the classroom with my classmates. We just had our sports day the *previous week, and we were already talking about our school festival which was going to be held in about four months. After our class members discussed it several times, we decided to perform a drama at the school festival. Because I belonged to the drama club, I was asked to write the *script for the drama and also work as the theater director to *supervise all the actors. I was really excited because I was going to play an important role in one of the biggest school events.

We practiced a lot during summer vacation though most of us had to study for university entrance exams. My classmates loved the script I wrote, and I was very proud of that. However, our practice was not going well because Masa, one of the actors, was having difficulty in remembering his *lines. We had only a month until the school festival. I was afraid that our drama would fail, and that feeling made me worried and upset. My *anxiety grew, and ⁽¹⁾one day in August, I finally shouted at Masa, "Why don't you practice harder? Our drama will fail!" He looked at me without saying anything. He seemed a little sad.

That afternoon, I took part in an event held by our school volunteer club. At the event, a doctor who was working abroad as a medical volunteer gave a speech *online. She was working at a *refugee camp and talked about life there. According to her, even the medical care we receive easily in Japan was not *available in the camp. I was very surprised when I heard that she was trying to do her best as a doctor even in that difficult situation. After the speech, a student asked the question, "Why did you decide to *quit your job as a doctor in Japan and choose to go there as a volunteer?" To that question, the doctor answered, "I came here because I *felt sorry for the refugees, and I thought I could save them. But I realized the reality was not so simple. The problems they are facing are so big that I cannot solve them. ⁽²⁾Now I think in a different way. I ask myself what I would do and how I would feel if I were one of them. By thinking like this, I can find ways to make their situation a little better and do things they actually want me to do." At the end of the event, the doctor introduced an English expression and asked us to remember it because it would be important for us in a *globalized world. The expression was, "Put yourself in someone else's shoes."

When the event ended, I went to talk to Mr. Oka, the teacher who held the event. I asked him, “What does the expression the doctor said mean?” He explained, “This expression shows the importance of imagining yourself in the situation of another person and trying to think how you would feel or act if you were in the same situation. By doing so, you will understand the person’s feelings, *perspectives, and opinions better.” He added, “The doctor wanted you to understand the importance of having empathy, not only sympathy.” According to him, “empathy” is the feeling you have when you understand and share another person’s experiences and *emotions, and “sympathy” is the feeling you have when you feel sorry for another person’s *misfortune.

When I was going home from school on that day, a classmate who was at the drama practice earlier came to me and said, “Recently, Masa has been busy because he has to help his parents. His parents run a restaurant, and the *dishwasher there broke last week. Now they have to wash the dishes by hand. Masa noticed they were very busy, so he decided to wash the dishes there until they get a new one.” Then I realized he didn’t have enough time to *memorize all his lines. I *regretted the thing I said to him during the practice. At the same time, I felt sympathy for him because he had to help his parents during summer vacation. Soon after that, the expression the doctor told us came to mind. I asked myself, “How would I feel if I were in his situation?”
I remembered the sad face he made when I shouted at him.

⁽³⁾ The next day at school, I ran to Masa and said, “I have an idea! You should *record your lines and listen to them many times.” This was the way I actually used when I first joined the drama club in high school. One of the members of the drama club gave this advice to me when I couldn’t memorize my lines and felt sad. I thought Masa could use this way even when he had to wash the dishes at his parents’ restaurant. He thought a little and answered with a smile, “I’ll try that!” Until the day of our performance, Masa and I tried to find time to practice together. We didn’t have a lot of time, but we continued to practice.

Finally the day of our school festival came. Though we didn’t win anything, our performance went well, and Masa didn’t forget even one word on the stage. I was happy that our performance was successful, but the best thing that happened that day was not our successful performance. That moment came after the performance. Masa came to me and said, “Thanks to you, I didn’t give up practicing. While we were practicing during summer vacation, I was really worried and upset. I didn’t know how I could memorize all the lines when I had little time. I played my role well today because you understood my situation and came up with an idea to help me.”

Through this experience, I’ve learned what the English expression “Put yourself in

someone else's shoes." means and why it's important. Last week, on TV, I heard about a museum program which introduced pictures in Yasashii Nihongo. *Yasashii Nihongo* means simple and easy Japanese words or expressions.⁽⁴⁾ It was first introduced to help people who don't understand the Japanese language very well to get necessary information, especially in difficult situations, such as natural disasters. Now it is also used in other ways, including providing everyday news and tourist information. It's easy to understand and also helpful to people who read and listen to it. From this April, I'll join a volunteer group that helps my city to make posters. These posters provide information in *Yasashii Nihongo* to people who don't use Japanese as their first language. I'm looking forward to putting myself in their shoes and seeing things from their perspectives. Though it won't be easy to understand their situations, this experience will help me find the things I can do when I have a chance to communicate with them in the future.

【注】 memorable 忘れられない	previous 前の	script 台本
supervise 監督する	line せりふ	anxiety 不安
online オンラインで	refugee camp 難民キャンプ	
available 利用できる	quit やめる	
feel sorry for ~ ~を気の毒に思う	globalized グローバル化した	
perspective 視点	emotion 感情	misfortune 不運
dishwasher 食器洗い機	memorize 暗記する	regret 後悔する
record 録音する		

〔問1〕 下線部 one day in August, I finally shouted at Masa について、その時の Sachi の気持ちとして最も適切なものを、次の中から選びなさい。

- ア Sachi was sad because Masa didn't like the script that she wrote.
- イ Sachi felt that Masa wasn't trying to do his best during their practice.
- ウ Sachi felt that every actor was practicing without any difficulties.
- エ Sachi was worried because every actor was so busy that they couldn't practice.

〔問2〕 下線部 Now I think in a different way. について、本文の内容と合うように次のように書き表すとき、①と②に入る語句の組み合わせとして最も適切なものを、下のア～エの中から選びなさい。

The doctor only before, but now she also .

- ア ① had empathy for the refugees ② feels sorry for them
- イ ① felt sorry for the refugees ② has sympathy for them
- ウ ① felt sympathy for the refugees ② shares their emotions
- エ ① understood the refugees' emotions ② has empathy for them

〔問3〕 下線部 I remembered the sad face he made when I shouted at him. について、本文の内容と合うように次の文を完成させるとき、 の中に入る最も適切なものを、下のア～エの中から選びなさい。

Sachi remembered Masa's sad face because .

- ア she was trying to understand how he was feeling
- イ she wanted to remember the thing she said to him
- ウ she knew she couldn't do anything to help him
- エ she couldn't find out why she felt sympathy for him

〔問4〕 本文の内容と合うように、次の質問の答えとして最も適切なものを、下のア～エの中から選びなさい。

What was the best thing that happened to Sachi on the day of the school festival?

- ア Many people liked her class performance, and her class received a prize.
- イ Her class performance went well though she had anxiety during summer vacation.
- ウ She learned that she made Masa's situation better though he had some difficulties.
- エ Masa memorized all his lines and did not forget even one word on the stage.

〔問5〕下線部 Yasashii Nihongo ⁽⁴⁾ について、本文の内容と一致しないものを、次の中から選びなさい。

- ア Sachi's city makes posters providing information in *Yasashii Nihongo*.
- イ *Yasashii Nihongo* isn't used as a spoken language, but it's used as a written language.
- ウ *Yasashii Nihongo* is helpful to provide information in case of natural disasters.
- エ Sachi will be a *Yasashii Nihongo* volunteer after graduating from high school.

〔問6〕本文の内容と合うものを、次のア～カの中から二つ選びなさい。

- ア At Sachi's high school, both the sports festival and the school festival are big events which are held in the same month every year.
- イ Because Sachi belonged to the drama club at school, she was asked to play an important role as an actor at the school festival.
- ウ Masa told Sachi why he could not memorize his lines when she shouted at him during summer, but she didn't believe him.
- エ Sachi didn't know that the doctor was working in the bad situation at the refugee camp until she attended the event.
- オ When Masa was in a difficult situation, Sachi came up with an idea by talking with a member of the drama club.
- カ Sachi had an experience of putting herself in someone else's shoes, so she has learned it is important to do that.

〔問7〕異なる文化的背景をもつ他者と関わる際、あなたが大切だと思うことは何か。本文で述べられていること以外で、80語以上100語以内の英語で書きなさい。その際、大切だと思うこととそう考える理由を具体的に述べること。ただし、「,」や「.」や「?」などは語数に含めないものとする。

