

I. 次の英文を読み、設問に答えなさい。

*NASA has just announced that over one thousand objects that might be planets have been discovered outside our solar system. These objects were discovered by the use of a space-based telescope named Kepler. Kepler's (1) is to find planets that might support carbon-based life, similar to life forms found on Earth. Kepler looks only at one small section of the universe so that it can (2) any changes in the light that arrives from the stars in that area. Every six seconds, data from the telescope is transferred to Kepler's computer, which does some initial work on the data to get it ready for scientists on Earth to analyze.

Once a month, data from stars that might have planets circling them is transferred to the scientists on Earth. These scientists then search the data to look for (3) of a planet going around a star. One thing they look for is a sudden decrease of light from a star. A regularly occurring decrease in the light from a star shows that a planet might exist, because a star's light will decrease a little bit when a planet moves between it and the Kepler telescope. After the scientists identify a potential planet with this method, they measure (ア) how much the light dims when the object passes between the star and Kepler. The change in brightness allows the size of the planet to be estimated. The scientists also measure the time between the appearances of the potential planet. With this (4), the scientists can estimate the size of the object's orbit. Also, they can estimate the surface temperature of the potential planet.

It is (5) to know the surface temperature because the presence of liquid water is necessary to support life. If a planet is too hot, any water on the surface will boil off as steam. If it is too cold, the water will freeze. But, if the temperature is just (6), a planet can keep liquid water on its surface. Any humans that visit such a planet might discover life forms that, like us, depend on liquid water to survive. Also, they might be able to use the liquid water from the surface.

Unfortunately, almost all of the objects that have been discovered by Kepler and confirmed to be planets are either too hot or too cold to support life. Even so, Kepler is helping us get closer to answering the age-old question: (イ)

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問1. 空所(1)～(6)に入れるのに最も適切な語を1つずつ選びなさい。

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|------------------|-------------|----------------|------------|
| (1) a. audition | b. emotion | c. fashion | d. mission |
| (2) a. avoid | b. break | c. notice | d. say |
| (3) a. advice | b. evidence | c. money | d. power |
| (4) a. art | b. homework | c. information | d. luck |
| (5) a. important | b. polite | c. quiet | d. wrong |
| (6) a. expensive | b. healthy | c. kind | d. right |

問2. 下線部(ア)の意味として最も近いものを1つ選びなさい。

- a. the amount of light fading
b. the cost of light, gas, and water
c. the quality of natural light
d. the price of a light bulb

問3. 空所(イ)に入れるのに最も適切なものを1つ選びなさい。

- a. Are we alone in the universe?
b. NASA can land on a new planet.
c. Kepler should be replaced by a new space-based telescope.
d. Where does the water come from?

問4. 本文の内容のタイトルとして最も適切なものを1つ選びなさい。

- a. How Kepler Finds Planets and Looks for Life
b. When NASA Will Start a New Space Project
c. What Scientists Discover on Earth
d. Why Astronauts Want to Travel in Space

問5. 本文の内容と一致するものをa～hより3つ選びなさい。

- a. NASA has discovered over 10,000 objects outside our solar system.
b. Many planets have been discovered by a scientist named Kepler.
c. Kepler's data is transferred to Earth 10 times per minute.
d. The scientists on Earth analyze the data from a spaceship every day.
e. A sudden decrease of light from a star shows that there might be a planet.
f. The scientists can estimate the distance between a potential planet and Earth.
g. Some life forms might exist if a planet can keep liquid water on its surface.
h. The objects discovered by Kepler are too distant from a star to support life.

II. 次の対話において、(1)～(8)の空所に入れるのに最も適切なものを1つずつ選びなさい。

1. A: Hey! Do you want to go ride bikes after school?

B: [(1)]

A: That's alright. We can play soccer instead.

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|--------------------------|-----------------------------------|
| a. Sounds great! | b. I'll go get mine. |
| c. My back tire is flat. | d. I don't want to play with him. |

2. A: Stop moving so I can take a picture!

B: [(2)]

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|----------------------------|------------------------------------|
| a. Give it to me. | b. Hurry up! It's taking too long. |
| c. Where will you take it? | d. I'll lend you my markers. |

3. A: Would you mind going to the supermarket for me?

B: [(3)] I'd be happy to.

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|------------------|-------------------|
| a. Yes, I would. | b. Of course. |
| c. No problem. | d. Where are you? |

4. A: I'm never going to understand physics!

B: [(4)] If you keep studying, I'm sure you'll get it.

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|------------------------------|-------------------------|
| a. Calm down. | b. Me, neither. |
| c. You should go to the gym. | d. Of course you won't. |

5. A: My favorite [(5)]

B: Why's that?

A: Because the colors on the trees are so beautiful!

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|----------------------------|------------------------------|
| a. food is curry and rice. | b. holiday is New Years. |
| c. flower is the rose. | d. time of the year is fall. |

6. A: Is there anything more delicious than hot chocolate?

B: [(6)]

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|-----------------------------|-------------------------------------|
| a. Not that I can think of. | b. Hot chocolate is made with milk. |
| c. It's more wet than hot. | d. I don't like coffee, thank you. |

7. A: Where is the closest convenience store?

B: [(7)]

A: That's farther than I expected.

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|-------------------------------|-----------------------|
| a. Across the street. | b. Just over there. |
| c. On the other side of town. | d. Around the corner. |

8. A: Did you see the news this morning?

B: [(8)]

A: I was surprised, too.

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|--------------------------------|-----------------------------------|
| a. No, I missed it. | b. What time was it on? |
| c. I couldn't believe my eyes. | d. Do you mean the baseball game? |

Ⅲ. 次のオリンピック競技についての説明を読み、その内容と合っているものを a ～ j より 3 つ選びなさい。

1. Swimming



Swimming is one of the most popular sports at the Summer Olympics. It has been part of the Games since the first modern Olympics in 1896. Swimmers compete in various styles like freestyle, backstroke, breaststroke, and butterfly. Races range from short sprints to long-distance events. Swimming is not just about speed; technique and endurance are also important. The most successful Olympic swimmer ever is American Michael Phelps, who has 28 Olympic medals.

2. Track and Field



Track and field events are among the oldest sports in the Olympic Games. These are running, jumping, and throwing competitions. Some of the most famous track and field events are the 100-meter sprint, the long jump, and the shot put. The javelin event dates to the ancient Olympics in Athens when people would throw war spears. The shot put comes from competitions in Ireland and Scotland, where people would compete by throwing heavy rocks as far as possible.

3. Gymnastics



Gymnastics is one of the oldest sports in the Olympics. It requires strength and flexibility. Olympic gymnastics includes events like the floor exercise, the balance beam, and the uneven bars. Both men and women compete in gymnastics, but there are different events for each gender. The routines are often very complex, and gymnasts train for years to perfect them. Many Olympic gymnasts begin training when they are still young children. To win in gymnastics, you must get a high score from the judges.

4. Basketball



Basketball was first played at the Olympics in 1936. It is a fast-paced sport where teams try to score points by shooting a ball into the opponent's basket. The game is played on a court with two teams of five players each. Olympic basketball games are very exciting, and people from all over the world cheer on their teams. The sport is especially popular in the United States, which has won more gold medals in basketball than any other country.

- a. Swimming has been part of the Olympic Games since 1936.
- b. The backstroke is one of the styles in Olympic swimming.
- c. Track and field events only include running competitions.
- d. The shot put dates back to Ancient Greece.
- e. Gymnasts perform routines on the balance beam and the uneven bars.
- f. Both basketball and gymnastics use judges to decide the score.
- g. Men and women compete in the same gymnastics events at the Olympics.
- h. Both gymnastics and track and field come from Ireland and Scotland.
- i. Basketball is the most recent Olympic sport of the four.
- j. Americans don't have many medals in swimming or basketball.

IV. 各文の空所に入れるのに最も適切なものを1つずつ選びなさい。

- (1) Our house was () into last night.
a. break b. breaking c. broke d. broken
- (2) Please take this medicine () six hours.
a. any b. both c. every d. some
- (3) How () does it take to get to Ueno?
a. far b. long c. many d. much
- (4) Where () you come from?
a. are b. did c. does d. have
- (5) Generally (), social media can sometimes be a dangerous tool.
a. speak b. speaking c. spoken d. to speak
- (6) Tom is only four years old. He is () to start elementary school.
a. not old enough b. not too young
c. too old d. young enough
- (7) The audience looked () with the concert.
a. disappoint b. disappointed c. disappointing d. disappointment
- (8) This question is really hard to figure ().
a. away b. down c. in d. out
- (9) According () the forecast, the rain will stop soon.
a. for b. from c. to d. toward
- (10) You () be too careful when driving a car.
a. aren't b. can't c. don't d. isn't

V. 次の各文の [] の中の単語を並べ換えて日本文の意味に相当する英文を完成させるとき、[] 内で3番目と5番目にくるものを、それぞれ選びなさい。

- (1) 彼は親切にも私のために財布を見つけてくれました。
He [a. enough b. find c. kind d. my e. purse
f. to g. was] for me.
- (2) もう5分歩けば地下鉄の駅に着きます。
Another [a. bring b. five c. minutes' d. to e. walk
f. will g. you] the subway station.
- (3) あなたのポケットの中にあるものをすべて見せてください。
Please show [a. all b. have c. in d. me e. that
f. you g. your] pocket.
- (4) リーさんが誕生パーティに最初に現れた人だった。
Mr. Lee [a. appear b. at c. first d. person e. the
f. to g. was] the birthday party.
- (5) なぜ私を子供のように扱うのですか。
Why do [a. as b. I c. if d. me e. treat
f. were g. you] a child?