

英 語

注 意

1. 問題は全部で11ページである。
2. 解答用紙に氏名・受験番号を忘れずに記入すること。(ただし、マーク・シートにはあらかじめ受験番号がプリントされている。)
3. 解答はすべて解答用紙に記入すること。
4. 問題冊子の余白等は適宜利用してよいが、どのページも切り離してはいけない。
5. 解答用紙は必ず提出のこと。この問題冊子は提出する必要はない。

マーク・シート記入上の注意

1. 解答用紙(その1)はマーク・シートになっている。HBの黒鉛筆またはシャープペンシルを用いて記入すること。
2. 解答用紙にあらかじめプリントされた受験番号を確認すること。
3. 解答する記号・番号の○を塗りつぶしなさい。○で囲んだり×をつけたりしてはいけない。

解答記入例(解答が1のとき)

1	●	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
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4. 一度記入したマークを消す場合は、消しゴムでよく消すこと。×をつけても消したことになる。
5. 解答用紙をよごしたり、折り曲げたりしないこと。

1 次の英文を読み、以下の問いに答えなさい。

Earth's past, present and future come together on the northern peninsula of Antarctica. It is the wildest, most desolate and mysterious of continents.

Clues to answering humanity's most basic questions are locked in this continental freezer. The continent is the size of the United States and half of Canada: Where did we come from? Are we alone in the universe? What's the fate of our warming planet?

The first explorers set foot in Antarctica 194 years ago. They were hunting 19th century riches of whale and seal oil and fur. Since then, the fist-shaped continent has proven a treasure chest for scientists. They are trying to determine everything from the creation of the cosmos to how high seas will rise with global warming.

"It's a window out to the universe and in time," said Kelly Falkner, polar program chief for the U.S. National Science Foundation.

For a dozen days in January, in the middle of the chilly Antarctic summer, The Associated Press followed scientists from different fields. They were searching for alien-like creatures, hints of pollution trapped in ancient ice, leftovers from the Big Bang, biological quirks that potentially could lead to better medical treatments. And perhaps most of all, signs of unstoppable melting.

The journey was aboard a Chilean navy ship along the South Shetland islands and vulnerable Antarctic Peninsula. That land juts off the continent. The trip logged 833 miles. It allowed the AP team a firsthand look at part of this vital continent.

Antarctica conjures up images of quiet mountains and white plateaus. But the coldest, driest and remotest continent is far from dormant. About 98 percent of it is covered by ice. And that ice is constantly moving. Temperatures can range from above zero in the South Shetlands and

Antarctic Peninsula to the unbearable frozen lands near the South Pole.

As an active volcano, Deception Island is a pot of extreme conditions. There are spots where the sea boils at 212 degrees Fahrenheit. In (7), it can be freezing at below 32. And while the sun rarely shines on the long Antarctic winters, nighttime never seems to fall on summer days.

Tourists come to Antarctica for its beauty and remoteness. Scientists, however, are all business. What they find could affect the lives of people thousands of miles away. If experts are right, and the West Antarctic ice sheet has started melting irreversibly, what happens here will determine if cities such as Miami, New York and New Orleans will have to regularly battle flooding from rising seas.

Antarctica "is big and . . . and we can't afford to ignore what's going on down there," said David Vaughan. He is science director of the British Antarctic Survey.

Often, scientists find something other than what they were looking for. Last year researchers calculated that ice on the western side of the continent was melting faster than expected. Last month, scientists researching vital geology in that melting were looking a half mile under the ice in pitch dark. They found a surprise. It was a fish a half foot long. And they found shrimp-like creatures were swimming by their cameras.

Geologists are entranced by Antarctica's secrets. On a recent scientific expedition led by Chile's Antarctic Institute, Richard Spikings, a research geologist at the University of Geneva, wielded a hammer. He collected rock samples in the South Shetlands and the Antarctic Peninsula. Curious members of a penguin colony on Cape Legoupil watched.

"We're also learning about the real antiquity of the Earth," Spikings said, "and how (continents) were configured together a billion years ago, half a billion years ago, 300 million years ago." He added that the insights will help him understand Antarctica's key role in the jigsaw of ancient super continents.

With names like Rodinia, Gondwana and Pangaea, scientists believe they were significant landmasses in Earth's history. They were periodically joined together through the movement of plates.

There is no local industry. Any pollution captured in the pristine ice and snow is from chemicals that traveled from afar, such as low levels of lead found in ice until it was phased out of gasoline. Or radiation levels found from above-ground nuclear tests. Those occurred thousands of miles away and decades ago. The tests were held by the U.S. and the Soviet Union, Vaughan said.

The ice tells how levels of carbon dioxide, the heat-trapping gas, have fluctuated over hundreds of thousands of years. This is also the place where there is a hole in the ozone layer. It was created from man-made refrigerants and aerosols. The hole parks for a couple months and causes trouble. It happens when sunlight creeps back to Antarctica in August. The light triggers a chemical reaction. That destroys ozone molecules, causing a hole that peaks in September and then closes with warmer weather in November.

Because of the pristine nature of the bottom of the world, when a meteorite lands here it stays untouched. So researchers find more meteorites. They often are from Mars, including one discovered nearly 20 years ago. It had scientists initially thinking, incorrectly, they had found proof that life once existed on Mars.

"Antarctica in many ways is like another planet," said Jose Retamales, the director of the Chilean Antarctic Institute.

"It's a completely different world."

Notes:

Antarctica 南極大陸, fist 握りこぶし, leftover(s) 残り物,
quirk(s) 深い溝, vulnerable 無防備な,
AP: Associated Press, conjure up 想起させる,
plateau(s) 台地, dormant 休眠中の, unbearable 忍び難い,
irreversibly 取り消せないほど, geology 地質学,
entrance(d) うっとりさせる, wield(ed) 振るう,
configure(d) 形成する, landmass(es) 広大な大地, pristine 原初の,
refrigerant(s) 冷却剤, aerosol(s) 煙霧剤, molecule(s) 微分子,
meteorite 隕石

[1] 下線部 A, B を日本語にしてください。A については, there が示す場所を具体的に明示すること。(解答用紙その2)

[2] 1~15 の質問に対して英文の内容から判断し, 最も適切だと思われるものをひとつ選び, その番号をマークしてください。(解答用紙その1)

1. What is the best title for this passage?

- (1) Are There Living Creatures on Other Planets?
- (2) Protect Our Earth: Our Precious Treasure
- (3) Frozen Continent Could Be Key to Earth's Future
- (4) Antarctica, a Mysterious Land for All Living Creatures

2. Antarctica is about the same size as

- (1) Australia.
- (2) the U.S. and half of Canada combined.
- (3) Russia.
- (4) South America.

3. Which statement is NOT true about Antarctica?

- (1) The sea around Antarctica is frozen everywhere, and the sun appears all year round.
- (2) Explorers reached Antarctica for the first time about 200 years ago.
- (3) The rate at which the ice is melting is different from place to place in Antarctica.
- (4) Antarctica is a valuable place for scientists to explore.

4. The word "it" means

- (1) global warming.
- (2) everything.
- (3) the creation of the cosmos.
- (4) Antarctica.

5. For a dozen days in January, who followed scientists in Antarctica?

- (1) Alien-like creatures.
- (2) Penguins.
- (3) The Associated Press.
- (4) A Chilean navy ship.

6. The word with the **most** similar meaning to "vital" in this context is

- (1) inactive.
- (2) nutritious.
- (3) gigantic.
- (4) essential.

7. Fill in the blank with the **most** suitable word.

- (1) others
- (2) other
- (3) each other
- (4) one another

8. What did Spikings do for his research?

- (1) He observed a penguin colony.
- (2) He served as polar program chief for the U.S. National Science Foundation.
- (3) He studied radiation levels found from above-ground nuclear tests.
- (4) He collected rock samples in Antarctica.

9. What did Spikings learn about on his journey?

- (1) The meteorites found in Antarctica.
- (2) The geological changes of the Earth.
- (3) The history of the southern peninsula.
- (4) The names of important scientists.

10. What type of pollution is captured in the pristine ice and snow?

- (1) Gasoline and radiation.
- (2) Lead and radiation.
- (3) Carbon dioxide and lead.
- (4) Carbon dioxide and man-made refrigerants.

11. Who wielded a hammer?

- (1) Retamales.
- (2) Gondwana.
- (3) Spikings.
- (4) Vaughan.

12. Which statement is true about the passage?
- (1) Gasoline helped to remove lead from the ice.
 - (2) The harmful substances found in Antarctica came from distant places.
 - (3) The U.S. and the Soviet Union have carried out nuclear tests in Antarctica.
 - (4) The pollution in the ice prevents people in Antarctica from starting local industries.
13. Which phrase is **most** similar in meaning to “fluctuate”?
- (1) Do something after something else.
 - (2) Go in a specified direction.
 - (3) Rise and fall irregularly.
 - (4) Move continuously and regularly.
14. The word “it” refers to
- (1) a refrigerant.
 - (2) the place.
 - (3) the ozone layer.
 - (4) a hole in the ozone layer.
15. About twenty years ago, what did some scientists first think when they found a meteorite from Mars?
- (1) That there was once life on Mars.
 - (2) That it came from the bottom of the sea.
 - (3) That there was no life on Mars.
 - (4) That Mars used to be like Antarctica.

2

以下のそれぞれの定義に従って、最初と最後の文字が与えられた最も適切な単語を書きなさい。ただし、1下線に1文字が入る。(解答用紙その2)

(解答例)

someone who is trained in science, especially someone whose job is to do scientific research

⇒(s _____ t)

正解(scientist)

1. a series of international athletic contests held in a different country once every four years

⇒(O _____ s)

2. the science or study of the mind and behavior

⇒(p _____ y)

3. to affect or change (someone or something) in an indirect but usually important way

⇒(i _____ e)

4. something which shows that something else exists or is true

⇒(e _____ e)

5. strong disagreement between people, groups, etc., that results in often angry argument

⇒(c _____ t)

3

次の会話文を読んで、以下の問いに答えなさい。

Bill: You look in a good mood today. What's up?

Keiko: I just bought an air filter for my house.

Bill: An air filter? For your house? Why?

Keiko: Haven't you seen the yellow sand in the air recently?

Bill: No, I haven't. What is it?

Keiko: It's the yellow sand that blows across East Asia every year.

Bill: OK. Now I've (16). But I thought that it was some kind of air pollution.

Keiko: Well, yes and no. At any rate, many people living in East Asia have to (17) with this situation every year.

Bill: Are you saying that the blowing yellow sand, which (18) across Japan in the spring, is a natural event?

Keiko: Yes, I am. However, it's a situation that is getting worse every year.

Bill: Why is it getting worse? And, who will (19) of this problem?

Keiko: It's getting worse because the Gobi Desert is growing in size. Yet, there's good news. Many people are now working together (20) reverse this desertification process.

Bill: This sounds like a big step in the right direction.

Keiko: I think so, too. I really believe that we can solve this serious problem soon.

[1] 下の選択肢1～0の中から、上の空欄16～20に最も適切だと思われるものをひとつ選び、その番号をマークしなさい。(解答用紙その1)

- | | |
|----------------|---------------|
| 1. shows up | 6. got it |
| 2. take up | 7. time out |
| 3. take out | 8. take care |
| 4. in order to | 9. keep going |
| 5. hands up | 0. put up |

[2] 次の文で、会話文の内容と一致するものは1を、一致しないものは2をマークしなさい。(解答用紙その1)

21. Bill thinks that Keiko looks pleased.
22. Neither Bill nor Keiko is interested in air filters.
23. Before he spoke to Keiko, Bill was worried about the yellow sand situation.
24. Keiko believes that the yellow sand is affecting people in East Asia.
25. Keiko is hopeful that a solution to this situation can be found.

4

次の日本語の文を表す英文を、与えられた語句を用いて完成させた場合、2番目と4番目になる語句を番号で答えなさい。(解答用紙その1)

26. 定刻通り新宿を出たのなら、その電車は今頃、町田に到着しているはずですが。

If the train left Shinjuku on time,
 now. 2番目 4番目

- ① arrived at ② it ③ by
 ④ have ⑤ Machida ⑥ should

- 1) ⑥-④ 2) ⑥-① 3) ②-① 4) ④-②

27. 家に帰る途中、突然雨が降ってきたので、彼は図書館に立ち寄ることをあきらめた。

The sudden rain
 home. 2番目 4番目

- ① give up ② him ③ stopping by
 ④ made ⑤ the library ⑥ on his way

- 1) ④-② 2) ⑤-① 3) ⑤-② 4) ②-③

28. まっすぐ行ってあの信号を左へ曲がりなさい。

Go traffic light.
2番目 4番目

- ① that ② left ③ and
 ④ straight ⑤ at ⑥ turn

- 1) ③-② 2) ③-⑥ 3) ⑤-③ 4) ⑤-⑥

29. テイラーさんはアメリカ人ですが、ハンバーガーやフライドポテトがとても嫌いです。

Although .
2番目 4番目

- ① Mr. Taylor ② an American
 ③ hamburgers and French fries ④ dislikes
 ⑤ he really ⑥ is

- 1) ④-⑤ 2) ②-③ 3) ⑥-⑤ 4) ⑥-④







