

N 英 語 問 題

注 意

1. 試験開始の指示があるまでこの問題冊子を開いてはいけません。
2. 解答用紙はすべてHBの黒鉛筆またはHBの黒のシャープペンシルで記入することになっています。HBの黒鉛筆・消しゴムを忘れた人は監督に申し出てください。(万年筆・ボールペン・サインペンなどを使用してはいけません。)
3. この問題冊子は16ページまでとなっています。試験開始後、ただちにページ数を確認してください。なお、問題番号はI～Vとなっています。
4. 解答用紙にはすでに受験番号が記入されていますので、出席票の受験番号が、あなたの受験票の番号であるかどうかを確認し、出席票の氏名欄に氏名のみを記入してください。なお、出席票は切り離さないでください。
5. 解答は解答用紙の指定された解答欄に記入し、その他の部分には何も書いてはいけません。
6. 解答用紙を折り曲げたり、破ったり、傷つけたりしないように注意してください。
7. この問題冊子は持ち帰ってください。

マーク・センス法についての注意

マーク・センス法とは、鉛筆でマークした部分を機械が直接よみとって採点する方法です。

1. マークは、下記の記入例のようにHBの黒鉛筆で枠の中をぬり残さず濃くぬりつぶしてください。
2. 1つのマーク欄には1つしかマークしてはいけません。
3. 訂正する場合は消しゴムでよく消し、消しきずはきれいに取り除いてください。

マーク記入例：

A	1	2	3	4	5
	○	○	●	○	○

 (3と解答する場合)

- I . 次の文を読み、下記の1～10それぞれに続くものとして、本文の内容ともっともよく合致するものを、各イ～ニから1つずつ選び、その記号を解答用紙の所定欄にマークせよ。

Global climate change is already affecting the yields of crops like corn much sooner than expected. According to a recent study, farmers have produced less food during the past three decades than they would have done if climate change was not happening. Global corn production, for example, is estimated to be about 3.8% lower than it would have been in a non-warmed world—the equivalent of Mexico not contributing to the corn market. “These things are happening now,” emphasizes David Lobell, an Earth system scientist and a co-author on the study.

The results come as a surprise to many. “I’ve been operating under the assumption we wouldn’t be able to detect changes until the 20s or 30s of this century,” says Gerald Nelson, an agricultural economist, who was not involved with the work. National crop yields are still rising as a general trend. But the fact that they are lower than a theoretical maximum is important when considering the huge challenge of feeding the world’s booming population, the authors say.

Bigger changes may lie ahead. The study notes that the United States, which produces about 40% of the world’s soya and corn, has so far been shielded from yield declines because its crop-growing regions haven’t warmed in summer over the past 30 years, perhaps due to natural variability or the cooling counter-effect of * aerosols. The study also shows that temperature has so far had a much greater effect on crop yields than ** precipitation. So it might be more important to breed heat tolerance into future generations of crops than to make them capable of surviving with less water.

Crop yields depend on many things, from unpredictable changes in the market price of *** fertilizer to the availability of new technologies. However, the authors assumed that most of these factors are not linked to the weather, making it possible to extract a model of how temperature and precipitation are linked to national yields. Although warm temperatures can extend growing seasons, excessive heat generally restricts crop growth, and promotes pests and water loss. Additional rainfall, meanwhile, is beneficial up to a point.

The authors used their model to estimate the effect that temperature and rainfall trends had on each nation’s food production from 1980 to 2008. They

estimate that, despite the fertilizing effect of increased carbon dioxide (CO₂) in the atmosphere, climate change has cut wheat production by 2.5%, although it has boosted that of rice by 2.9% and soya beans by 1.3%. It has also, they calculate, caused an increase in food commodity prices worldwide of about 6.4% over 30 years. The authors admit that their results are packed full of assumptions. They could be overestimating climate's effects, because the model doesn't take into account the fact that farmers might switch to different crop varieties or change their planting dates as conditions change. Conversely, the results could be an underestimate, given that the model doesn't look specifically at extreme weather events such as droughts, floods and heatwaves. "It's the best we can do with the data available," says Lobell.

The general result of about a 5% yield loss per degree Celsius of warming is consistent with previous studies, says Lobell. But the authors' conclusions differ from previous work in a few important ways. A study published by *Nature* in 1994 concluded that the fertilizing effect of carbon dioxide would probably counteract the negative effects of warming at low ^{****} latitudes for a few decades to come. "We don't see that," says Lobell.

That same study also concluded that warming would hit food production in developing countries harder than in the developed world. This is because many richer nations are in colder climates that might benefit from warming, and are probably more adaptable to changing conditions. But Lobell and others don't see this happening either. Instead, Lobell guesses, the relatively high production per unit area in the developed world means that developed countries are actually more easily affected by unpredictable changes in the weather. Poorer nations, on the other hand, have a low production rate and are as much affected by other factors, such as the availability of fertilizer. The results should add impetus for developed nations to take the effects of climate change on food production seriously, Lobell says. "Adaptation isn't something for the future, it's something we need right now." The United States may already have made a start: in February, the US Department of Agriculture invested \$60 million in three studies on the effects of climate change on crops and forests.

*aerosols : エアゾール

**precipitation : 降雨量

***fertilizer : 化学肥料

****latitudes : 緯度

1. The results of Lobell's study came as a surprise because they suggest that
 - イ. global corn production has not decreased over the past 30 years.
 - ロ. crop yields are still rising in most countries around the world.
 - ハ. climate change is influencing food production more quickly than expected.
 - ニ. global warming will make it easier to feed the world's population.

2. The passage suggests that future crops need to be able to better resist
 - イ. heavy rainfall.
 - ロ. carbon dioxide.
 - ハ. high temperatures.
 - ニ. insects.

3. The underlined word "extract" (paragraph 4) is closest in meaning to
 - イ. analyze.
 - ロ. derive.
 - ハ. indicate.
 - ニ. withdraw.

4. The underlined phrase "their results are packed full of assumptions" (paragraph 5) suggests that the results
 - イ. should be interpreted with caution.
 - ロ. are too optimistic about the future.
 - ハ. should not be trusted at all.
 - ニ. are too complicated to understand.

5. The main purpose of paragraph 5 is
 - イ. to explain the difficulty of making conclusions based on statistics.
 - ロ. to criticize various studies on climate change and agriculture.
 - ハ. to consider the future effects of climate change on food production.
 - ニ. to discuss the results and limitations of Lobell's study.

6. Lobell's study showed all of the following results EXCEPT that
- ㄱ. climate change has caused rice production to increase.
 - ㄴ. extreme weather events have caused a decrease in crop yields.
 - ㄷ. the U.S. has not yet experienced a decrease in soya production.
 - ㄹ. each degree Celsius of warming leads to a 5% loss in crop yields.
7. One difference between Lobell's results and the conclusions of previous studies is that carbon dioxide has
- ㄱ. had an overall negative influence on crop yields.
 - ㄴ. affected crops in developed countries more than in developing countries.
 - ㄷ. not fertilized crops in low latitudes as much as expected.
 - ㄹ. contributed to the effects of global warming on crop yields.
8. The underlined word "impetus" (paragraph 7) is closest in meaning to
- ㄱ. blame.
 - ㄴ. incentive.
 - ㄷ. publicity.
 - ㄹ. weight.
9. The author would probably agree that
- ㄱ. developed countries should investigate ways of increasing crop yields.
 - ㄴ. evidence of climate change is still not convincing.
 - ㄷ. there is little that can be done to protect crops against global warming.
 - ㄹ. it is developing countries that must solve the problem of climate change.
10. The most appropriate title for this passage is
- ㄱ. Food Production in the 21st Century.
 - ㄴ. The Influence of Temperature on Crop Growth.
 - ㄷ. Climate Change in the Developing World.
 - ㄹ. Crop Yields and Global Warming.

II. 次の文を読み、下記の1～10それぞれに続くものとして、本文の内容ともっともよく合致するものを、各イ～ニから1つずつ選び、その記号を解答用紙の所定欄にマークせよ。

One afternoon in the mid-1830s, an Englishman named Rowland Hill happened to observe the response of a housemaid when the postman delivered a letter to her. In those days, the recipient of a letter, not the sender, paid the postage due on it—and the recipient could refuse to accept delivery if he or she wished.

That's just what the housemaid did, but there was something unusual about the way she did it. She studied the outside of the envelope, almost as if she were looking for some kind of hidden message. Then, she handed the letter back to the postman and refused to pay the postage due on the letter.

Hill knew what would happen next: the postman would take the letter back to the post office and throw it onto a pile of hundreds or probably thousands of similar “dead” letters that clogged every English post office in the 1830s. Sooner or later the post office would return that letter to the sender, free of charge.

In other words, every dead letter sent through the English mail in those days was sent through twice—first to the recipient (who refused it), and then back to the sender—even though no postage was ever collected from either the sender or the recipient. The enormous cost of delivering, storing, and returning so many dead letters was passed on to paying customers in the form of higher postage rates. Thanks to this and other glaring inefficiencies, in the mid-1830s, sending a letter across England could cost as much as an entire day's wage—historians estimate that those years saw the highest postal rates in the history of the English Post Office.

The system was wide open to abuse. It was common for people to hide some kind of coded message on the outside of the envelope, which the recipient could read without having to pay the postage on the letter. Hill was sure that this was what the housemaid and the sender of her letter were up to. An educator by profession, he decided to conduct a comprehensive statistical analysis of the English postal system to see if he could improve upon it.

In 1837, Hill completed his study and published his findings in a pamphlet titled *Post Office Reform: Its Importance and Practicability*. In it, he pointed out the

obvious problems associated with having the recipient of a letter pay the postage. He also criticized the practice of calculating postage by the mile: in those days a letter that traveled 15 miles or less required 4 pence postage, and a letter that traveled 500 miles or more cost 15 pence. But charging by the mile meant that postal employees had to spend time measuring distances between towns and calculating postage due for every letter they delivered, a practice Hill thought was wasteful.

Hill calculated that when all of the inefficiencies were taken into consideration, on average it cost the Post Office about one and one-half pence to deliver a letter. He proposed lowering the postage rate to a uniform price of one penny per letter, regardless of how far it had to travel to get to its destination. And he proposed that the sender of the letter pay the postage in advance, so that the Post Office wouldn't waste time or money delivering letters that no one wanted to pay for. Payment in advance also saved postmen from the trouble of calculating postage due, as well as from the trouble of trying to get letter recipients to pay it. They could now devote their time to actually delivering the mail.

Better yet, by removing dead letters and other inefficiencies from the system, Hill believed that the Post Office's cost of delivering a letter would drop from one and one-half pence per letter to under a penny, which meant that the penny stamp would cover the entire cost of sending the letter. Reducing postage rates from four to fifteen pence down to a penny would also mean that ordinary people would be able to afford to send a letter for the first time. And with payment required in advance, people couldn't cheat the system.

But how would the Post Office know for sure whether postage for a particular letter had been paid in advance or not? Hill proposed that the Post Office mark each letter using a special rubber stamp to indicate the postage had been paid. And to save customers the trouble of standing in line every time they needed a post office to stamp a piece of mail, he proposed that the Post Office sell prestamped envelopes that people could just drop in a mailbox whenever they were ready to send a letter.

For those who preferred to use their own stationery, Hill proposed that the Post Office sell "a bit of paper just large enough to bear the stamp," complete with gum on the reverse side that, when moistened, would allow the piece of paper to

stick to the envelope. Hill didn't realize the significance of his idea at the time—he thought the prestamped envelopes would be a bigger hit than the prestamped “bits of paper,” as he called them—but he had just invented the world's first adhesive postage stamp.

England's *House of Commons was intrigued enough by Hill's proposals that it formed a committee to study them in 1837. Two years later, the government adopted his proposals, and on January 10, 1840, “universal penny postage” became the law of the land.

Just as he'd predicted, Hill's reforms revolutionized mail service in England. The number of letters delivered by the Post Office doubled from 83 million in 1839—the last year of the old system—to nearly 170 million the following year; by 1847 the Post Office was delivering more than 322 million letters a year. And although it had lowered its postal rates in some cases as much as 94 percent, by 1850 the Post Office was generating just as much revenue as it had in 1839.

The advantages of Hill's system were obvious, and other countries took note. In 1845 the United States reformed its postal rate structure to be in line with England's; Canada and France followed four years later. By 1870, more than 30 countries around the world had adopted Hill's system; for the rest of the world, it was just a matter of time.

*House of Commons : 下院

1. The author uses the example of the housemaid to show that people
 - イ. didn't trust postal employees.
 - ロ. were very poor in those days.
 - ハ. cheated the postal system.
 - ニ. didn't like to receive “dead” letters.

2. One reason the English Post Office had such high postal rates in the mid-1830s is that
- イ. most letters were sent to distant locations.
 - ロ. the postmen demanded high wages.
 - ハ. only wealthy people could afford to send letters.
 - ニ. people refused to pay postage on many letters.
3. The underlined word “glaring” (paragraph 4) is closest in meaning to
- イ. expensive.
 - ロ. inconvenient.
 - ハ. obvious.
 - ニ. ridiculous.
4. In his pamphlet, *Post Office Reform: Its Importance and Practicability*, Rowland Hill proposed that
- イ. postal employees should decide the postage for each letter.
 - ロ. letter senders should pay postage in advance.
 - ハ. postal employees should record the distances between towns.
 - ニ. letter senders should always use the post office to send letters.
5. The underlined word “uniform” (paragraph 7) is closest in meaning to
- イ. consistent.
 - ロ. easy.
 - ハ. official.
 - ニ. ordinary.
6. Hill believed that, once his reforms were adopted, the actual cost of delivering a letter would be
- イ. one penny.
 - ロ. one and a half pence.
 - ハ. less than one penny.
 - ニ. between four and fifteen pence.

7. The passage suggests that Hill

- イ. did not believe that the government would adopt his proposals.
- ロ. thought that the “bits of paper” would be his best invention.
- ハ. was confident that his proposals for postal reform would succeed.
- ニ. did not want people to use their own stationery for sending letters.

8. The passage states that Hill’s postal reforms

- イ. met a great deal of resistance when first introduced.
- ロ. turned out to be more expensive than the traditional system.
- ハ. reduced the need for postal employees.
- ニ. allowed ordinary people to send more letters.

9. Between 1840 and 1849,

- イ. five countries adopted the English postal rate system.
- ロ. the English Post Office earned less each year than it had in 1839.
- ハ. postal rates in England varied widely.
- ニ. the English Post Office delivered twice as many letters as it had in 1839.

10. The most appropriate title for this passage is

- イ. The History of English Postal Delivery.
- ロ. Rowland Hill: English Inventor of the 19th Century.
- ハ. How to Make Postal Delivery More Efficient.
- ニ. A Revolution in the Postal Service.

Ⅲ. 次の1～7それぞれの空所を補うのもっとも適当なものを、各イ～ニから1つずつ選び、その記号を解答用紙の所定欄にマークせよ。

1. I took up scuba-diving a couple of years ago (1) a high school friend of mine introduced it to me.

イ. than ロ. when ハ. during ニ. while

2. Mr. Andrews said that he had missed his 5 o'clock flight (2) the traffic jams, and so would not be arriving in Los Angeles till the next morning.

イ. due to ロ. for ハ. with ニ. caused by

3. Grain consumption in developing countries has increased 80% over the past 30 years, compared with (3) of only 22% in developed countries.

イ. a decrease ロ. a rise ハ. a correction ニ. a turnover

4. One famous doctor says that organic food is no (4) of health but it may be better for your body in some ways.

イ. guarantee ロ. help ハ. certainty ニ. proposal

5. As we waited for the rescue team, our food supply ran (5).

イ. out ロ. poor ハ. through ニ. weak

6. In 1998 a national law (6) that banned smoking in all public indoor spaces.

イ. put into effect ハ. came into effect
ロ. had effective ニ. started effective

7. Fill (7) the application before you come to the interview.

イ. on ロ. out ハ. up ニ. with

IV. 次の空所(1)~(5)を補うのにもっとも適当な語を、それぞれ対応する下記のイ~ニから1つずつ選び、その記号を解答用紙の所定欄にマークせよ。

Jeremy: Do you know (1) Herbert's phone number is?

Susan : Oh, Herbert's phone number? I don't have my address book on me...
hmmm...I can't (2) it right now.

Jeremy: That's too bad! I've got to find him. It's (3)! If I can't find him
today, I'll be in trouble!

Susan : Well, (4) call Michelle? She has his phone number.

Jeremy: I've tried, but no one answered.

Susan : How about (5) a message on her answering machine?

- | | | | |
|---------------|--------------|----------------|------------|
| 1. イ. how | ロ. that | ハ. what | ニ. which |
| 2. イ. forget | ロ. imagine | ハ. memorize | ニ. recall |
| 3. イ. fine | ロ. hopeless | ハ. sad | ニ. urgent |
| 4. イ. if you | ロ. supposing | ハ. when do you | ニ. why not |
| 5. イ. leaving | ロ. giving | ハ. replying | ニ. sending |

V. 次の文中の空所 ⁽¹⁾ () ~ ⁽⁴⁾ () のそれぞれについて、() 内の語を並べかえて意味の通じる正しい文にせよ。ただし、解答は () の並べかえた語順で②番目と③番目に来る語の記号だけを解答欄の所定欄にマークせよ。

To write a good summary, you must be able to suspend your own beliefs for a time and put yourself in the shoes of someone else. This means playing what is called the “believing game,” in which you try to inhabit the world-view of those whose argument you are summarizing and try to see their ideas from their own perspective. This ⁽¹⁾ (イ. ability ロ. convictions ハ. one’s ニ. own ホ. suspend ヘ. to) temporarily is a hallmark of good actors, who must convincingly become ⁽²⁾ (イ. characters ロ. hate ハ. in ニ. may ホ. real ヘ. they) life. When a writer plays the believing game well, readers should not be able to tell whether or ⁽³⁾ (イ. agree ロ. ideas ハ. not ニ. the ホ. with ヘ. you) that are being summarized. If, as a writer, you cannot or will not suspend your own beliefs in this way, you are likely ⁽⁴⁾ (イ. are ロ. produce ハ. so ニ. summaries ホ. to ヘ. which) obviously biased that they undermine your credibility with readers.

【以下余白】

