

# P 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、消しきら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。

Though Robin and Joan Rolfs owned two rare talking dolls manufactured by Thomas Edison's \*phonograph company in 1890, they did not dare play the \*\* wax cylinder records placed inside each one. The Rolfses, longtime collectors of Edison phonographs, knew that if they turned the cranks on the dolls' backs, the steel phonograph needle might damage or destroy the \*\*\* grooves of the hollow, ring-shaped cylinder. And so for years, the dolls sat side by side inside a display cabinet, bearers of a message from the dawn of sound recording that nobody could hear.

In 1890, Edison's dolls were a failure; production lasted only six weeks. Children found them difficult to operate and more scary than cute. The recordings inside, which featured lines from nursery rhymes, wore out quickly. Yet sound historians say the cylinders were the first entertainment records ever made, and the young girls hired to recite the rhymes were the world's first recording artists.

Year after year, the Rolfses asked experts if there might be a safe way to play the recordings. Then a government laboratory developed a method to play fragile records without touching them. The technique relies on a microscope to create images of the grooves in exquisite detail. A computer approximates with great accuracy the sounds that would have been created by a needle moving through those grooves. In 2014, the technology was made available for the first time outside the laboratory. "The fear all along is that we don't want to damage these records. We don't want to put a needle on them," said Jerry Fabris, the curator of the Thomas Edison Historical Park in West Orange, New Jersey. "Now we have the technology to play them safely."

Last month, the Historical Park posted online three never-before-heard Edison doll recordings, including the two from the Rolfses' collection. "There are probably more out there, and we're hoping people will now get them digitized," Mr. Fabris said. The technology, which is known as Irene (Image, Reconstruct, Erase Noise, Etc.), was developed by the particle physicist Carl Haber and the engineer Earl Cornell at Lawrence Berkeley Laboratory. Irene extracts sound from cylinder and disk records. It can also reconstruct audio from recordings so badly damaged that

they were considered unplayable. “We are now hearing sounds from history that I did not expect to hear in my lifetime,” Mr. Fabris said.

The Rolfses said they were not sure what to expect in August when they carefully packed their two Edison doll cylinders, still attached to their motors, and drove from their home in Hortonville, Wisconsin, to the Northeast Document Conservation Center in Andover, Massachusetts. The center had recently acquired Irene technology. Cylinders carry sound in a spiral groove cut by a phonograph recording needle that vibrates up and down, creating a surface made of tiny hills and valleys. In the Irene set-up, a microscope set above the shaft takes thousands of high-resolution images of small sections of the grooves. Stitched together, the images provide a map of the cylinder’s surface, charting changes in depth as small as one five-hundredth the thickness of a human hair. Pitch, volume, and tone are all encoded in the hills and valleys and the speed at which the record is played.

At the conservation center, the preservation specialist Mason Vander Lugt attached one of the cylinders to the end of a rotating shaft. Gathered around a computer screen, the Rolfses first saw the waveform generated by Irene. Then came the digital audio. The words were at first indistinct, but as Mr. Lugt filtered out more of the noise, the rhyme became clearer. “That was the eureka moment,” Mr. Rolfs said. In 1890, a girl in Edison’s laboratory had recited:

*There was a little girl,  
And she had a little curl  
Right in the middle of her forehead.  
When she was good,  
She was very, very good.  
But when she was bad, she was horrid.*

Recently, the conservation center turned up another surprise. In 2010, the  
\*\*\*\*  
Woody Guthrie Foundation received 18 oversize phonograph disks from an unnamed donor. No one knew if any of the dirt-stained recordings featured Guthrie, but Tiffany Colannino, then the foundation’s archivist, had stored them unplayed until she heard about Irene. Last fall, the center extracted audio from one of the records,

labeled “Jam Session 9” and emailed the digital file to Ms. Colannino. “I was just sitting in my dining room, and the next thing I know, I’m hearing Woody,” she said. In between solo performances of “Ladies Auxiliary,” “Jesus Christ,” and “Dead or Alive,” Guthrie tells jokes, offers some backstory, and makes the audience laugh. “It is quintessential Guthrie,” Ms. Colannino said.

The Rolfses’ dolls are back in the display cabinet in Wisconsin. But with audio stored on several computers, they now have a permanent voice.

\*phonograph : 蓄音機

\*\*wax cylinder records : 蠟管 (録音・再生用の蠟を塗った円筒) 式レコード

\*\*\*grooves : レコードに刻まれた溝

\*\*\*\*Woody Guthrie : アメリカのフォークソング歌手

1. For many years Robin and Joan Rolfs did not listen to their Edison dolls because they
  - イ. knew that the sound would be difficult to hear.
  - ロ. were afraid to harm the cylinders inside the dolls.
  - ハ. did not know how to operate the dolls.
  - ニ. preferred to use the dolls as decorations in their house.
  
2. One reason Edison dolls failed as a commercial product was that
  - イ. the needle inside them was dangerous for children.
  - ロ. Edison’s factory could not meet the large demand.
  - ハ. the nursery rhyme recordings were out of date.
  - ニ. the dolls frightened children.
  
3. The underlined word “exquisite” (paragraph 3) is closest in meaning to
  - イ. educated.
  - ロ. expensive.
  - ハ. fine.
  - ニ. simple.

4. According to the passage, Jerry Fabris
- イ. had the original idea for the Irene technology.
  - ロ. hopes that Irene will be used with other Edison dolls.
  - ハ. is looking for ways to improve Irene technology.
  - ニ. believes that there are no more Edison dolls in existence.
5. Irene technology is named after
- イ. the things that the technology does to recreate sound.
  - ロ. the girl who recorded the nursery rhymes in 1890.
  - ハ. the wife of one of the developers, Carl Haber.
  - ニ. the laboratory where the technology was invented.
6. Thanks to Irene technology, people can
- イ. see images of dolls on a computer screen.
  - ロ. communicate with others interested in Edison's work.
  - ハ. hear sounds from dirty or damaged records.
  - ニ. learn about how sounds were recorded in Edison's time.
7. All of the following are true about Irene technology EXCEPT that it
- イ. produces sounds that resemble the original recording.
  - ロ. makes use of a microscope, camera, and computer.
  - ハ. has already been used to hear voices from entertainment records.
  - ニ. allows the needle to touch the grooves without damaging them.
8. The Rolfses first heard the voice on their Edison dolls at
- イ. the Historical Park.
  - ロ. a conservation center.
  - ハ. a museum.
  - ニ. their home.

9. The underlined word “quintessential” (paragraph 7) is closest in meaning to

ㄱ. mistaken.

ㄴ. necessary.

ㄷ. practical.

ㄹ. typical.

10. The most appropriate title for this passage is

ㄱ. The History of Audio Technology.

ㄴ. Edison Dolls: A Failed Invention.

ㄷ. Recent Advances in Digital Recording.

ㄹ. Voices from the Past.

Ⅱ . 次の文を読み、下記の設問 A・B に答えよ。解答は解答用紙の所定欄にしるせ。

“More is better.” From the number of gigabytes in a cellular data plan to the horsepower in a pickup truck, this idea is common in American culture. When it comes to college students, the belief that more is better may underlie their widely-held view that \*laptops in the classroom improve their academic performance. Laptops do in fact allow students to do more, like engage in online activities and demonstrations, collaborate more easily on papers and projects, access information from the Internet, and take more notes. Indeed, because students can type significantly faster than they can write, those who use laptops in the classroom tend to take more notes than those who write out their notes by hand. Moreover, when students take notes using laptops they tend to take exact notes, writing down every last word uttered by their professor.

Obviously it is advantageous to draft more complete notes that precisely capture the course content and allow for a complete review of the material at a later date. Only it isn't. New research by Pam Mueller and Daniel Oppenheimer demonstrates that students who write out their notes on paper actually learn more. Across three experiments, Mueller and Oppenheimer had students take notes in a classroom setting and then tested students on their memory for factual detail, their conceptual understanding of the material, and their ability to synthesize and generalize the information. Half of the students were instructed to take notes with a laptop, and the other half were instructed to write the notes out by hand. As in other studies, students who used laptops took more notes. In each study, however, those who wrote out their notes by hand had a stronger conceptual understanding and were more successful in applying and integrating the material than those who took notes with their laptops.

What drives this paradoxical finding? Mueller and Oppenheimer argue that taking notes by hand requires different types of intellectual processing than taking notes on a laptop, and these different processes have consequences for learning. Writing by hand is slower and more difficult than typing, and students cannot possibly write down every word in a lecture. Instead, they listen, digest, and summarize so that they can concisely capture the essence of the information. Thus,

taking notes by hand forces the brain to engage in some heavy “mental lifting,” and these efforts foster comprehension and the ability to remember. When typing, by contrast, students can easily produce a written record of the lecture without processing its meaning, as faster typing speeds allow students to <sup>\*\*</sup>transcribe a lecture word for word without devoting much thought to the content.

To evaluate this theory, Mueller and Oppenheimer assessed the content of notes taken by hand versus laptop. Their studies included hundreds of college students, and the lecture topics ranged from bats to economics. Content analysis of the notes consistently showed that students who used laptops had more exact transcription of the lecture material than those who wrote notes by hand. Moreover, highly exact note content was associated with *lower* ability to remember the lecture material. It appears that students who use laptops can take notes in a fairly mindless, mechanical fashion, with little analysis or synthesis by the brain. This kind of shallow transcription fails to promote a meaningful understanding or application of the information.

If the source of the advantage for handwritten notes derives from the conceptual processes they evoke, perhaps instructing laptop users to summarize rather than take word-for-word notes will improve performance. Mueller and Oppenheimer explored this idea by warning laptop note takers against the tendency to transcribe information without thinking, and explicitly instructed them to think about the information and type notes in their own words. Despite these instructions, students using laptops showed the same level of word-for-word content and were no better in synthesizing material than students who received no such warning. It is possible that these direct instructions to improve the quality of laptop notes failed because it is so easy to rely on less demanding, mindless processes when typing.

It's important to note that most of the studies that have compared note-taking by hand versus laptop have used immediate memory tests administered very shortly (typically less than an hour) after the learning session. In real classroom settings, however, students are often tested days if not weeks after learning new material. Thus, although laptop users may not encode as much during the lecture and thus may be disadvantaged on immediate assessments, it seems reasonable to expect that the additional information they record will give them an advantage when reviewing



material after a long delay.

Wrong again. Mueller and Oppenheimer included a study in which participants were asked to take notes by hand or by laptop, and were told they would be tested on the material in a week. When participants were given an opportunity to study with their notes before the final assessment, once again those who took handwritten notes outperformed laptop participants. Because handwritten notes contain students' own words and handwriting, they may serve as more effective memory aids by recreating the context (thought processes, emotions, conclusions) as well as the content (individual facts) from the original learning session.

These findings hold important implications for students who use their laptops to access lecture outlines and notes that have been posted by professors before class. Because students can use these posted materials to access lecture content with a mere click, there is no need to organize, synthesize or summarize in their own words. Indeed, students may take very minimal notes or not take notes at all, and may consequently miss the opportunity to engage in the mental work that supports learning.

Beyond altering students' intellectual processes and thereby reducing learning, laptops pose other threats in the classroom. In the Mueller and Oppenheimer studies, all laptops were disconnected from the Internet, thus eliminating any disruption from email, instant messaging, surfing, or other online distractions. In most typical college settings, however, Internet access is available, and evidence suggests that when college students use laptops, they spend 40% of class time using applications unrelated to coursework, are more likely to fall off task, and are less satisfied with their education. In one study with law school students, nearly 90% of laptop users engaged in online activities unrelated to coursework for at least five minutes, and roughly 60% were distracted for half the class.

Technology offers innovative tools that are shaping educational experiences for students, often in positive and dynamic ways. Yet recent research serves as a reminder that even when technology allows us to do more in less time, it does not always improve learning. Learning involves more than the receipt and reproduction of information. If we want students to synthesize material, draw inferences, see new connections, evaluate evidence, and apply concepts in novel situations, we need

to encourage the deep, effortful intellectual processes that underlie these abilities.  
When it comes to taking notes, students need fewer gigabytes, more brain power.

\*laptops : ノートパソコン

\*\*transcribe : (講義などを) 記録する, 打ち出す

A. 次の1～9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、その記号をマークせよ。

1. The first paragraph suggests that American culture is characterized by the  
value it places on

- イ. originality.
- ロ. quality.
- ハ. quantity.
- ニ. variety.

2. Research shows that taking notes by typing on a laptop

- イ. is more physically demanding than taking notes by hand.
- ロ. allows students to take more notes than taking notes by hand.
- ハ. requires more mental activity than taking notes by hand.
- ニ. involves the same mental processes as taking notes by hand.

3. The main purpose of paragraph 3 is

- イ. to interpret the results of recent experiments on note-taking.
- ロ. to discuss the study habits of American college students.
- ハ. to defend the use of laptop computers in college classrooms.
- ニ. to describe the challenge of taking notes in college classrooms.

4. The underlined word “evoke” (paragraph 5) is closest in meaning to
- ㄱ. carry out.
  - ㄴ. draw out.
  - ㄷ. point out.
  - ㄹ. take out.
5. Paragraph 5 suggests that college students
- ㄱ. do not like to participate in psychology experiments.
  - ㄴ. find it very difficult to type notes in their own words.
  - ㄷ. do most of their thinking outside of class.
  - ㄹ. tend to disagree with their teacher’s advice.
6. In their research on note-taking habits, Mueller and Oppenheimer tested students on all of the following EXCEPT
- ㄱ. how well students could remember information from the lecture.
  - ㄴ. how well students could apply information from the lecture.
  - ㄷ. how quickly students forgot information from the lecture.
  - ㄹ. how deeply students understood information from the lecture.
7. Mueller and Oppenheimer found that one advantage of using handwritten rather than typed notes to study for a test is that handwritten notes
- ㄱ. remind students of the original lecture experience.
  - ㄴ. are easier to share with other students.
  - ㄷ. contain more exact information from the lecture.
  - ㄹ. make it possible to study without thinking deeply.
8. The author would most likely agree that the use of computers in a learning environment
- ㄱ. makes it easier for students to learn things.
  - ㄴ. encourages students to be active learners.
  - ㄷ. does not require any rules or guidelines.
  - ㄹ. has a negative as well as positive side.

9. The most appropriate title for this passage is

- イ. How Can Professors Teach Most Effectively?
- ロ. The Effect of Internet Use on Classroom Behavior.
- ハ. Are Laptops Helpful in the College Classroom?
- ニ. College Life in the Age of Laptop Computers.

B. 文中の下線部 it does not always improve learning (第10段落) を、it が何を指しているか明示して25字以内で和訳せよ。ただし、句読点は合計字数に含まれる。

Ⅲ. 次の文1～6は、いずれもある単語が欠けているため、文法的に正しい文章になっていない。それぞれの文を正しい文章とするために補うのもっとも適当な1語を、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. He used to the terrible climate after living several years in the new country he moved to.

イ. before            ロ. got            ハ. put            ニ. where

2. Angola became independent after 14 years armed resistance to Portuguese colonial rule.

イ. against            ロ. from            ハ. of            ニ. on

3. The bank must find a long-term solution to make for the losses.

イ. it            ロ. might            ハ. out            ニ. up

4. It was only a few days that we realized we had committed a fatal mistake.

イ. after            ロ. behind            ハ. since            ニ. unless

5. Studies have shown that a crowded airplane is no more full of germs other enclosed spaces—and usually less so.

イ. are            ロ. no            ハ. than            ニ. which

6. The mayor ordered the townspeople leave their houses right away when the tsunami warning was issued.

イ. at            ロ. for            ハ. to            ニ. with

IV. 次の空所(1)～(6)を補うのにもっとも適当なものを、それぞれ対応する各イ～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。

Rie: Do you believe in love?

Tom: ( 1 )

Rie: All right, tell me about it. What do you know about it?

Tom: Love means waking up in the morning knowing good things will happen.

Rie: ( 2 )

Tom: It also makes people feel worthwhile. You know there's a heart beating inside, singing, and you know this is what people are born to feel. It's eternal and...

Rie: So that's what it is: singing and dancing and flying.

Tom: ( 3 ) I'm serious.

Rie: May I tell you something, Tom?

Tom: ( 4 )

Rie: Love doesn't sing in every case.

Tom: What do you mean?

Rie: Sometimes it pulls you to the bottom. To the darkness of despair and disappointment.

Tom: ( 5 )

Rie: Maybe. But most of the time, love turns sour pretty quickly.

Tom: Actually, I think love lasts forever.

Rie: ( 6 )

Tom: That's because you're simply talking about romantic love. I'm talking about love for all mankind, the feeling we have for our fellow human beings.

- (1) イ. I don't think so.  
ロ. No way.  
ハ. Who cares?  
ニ. Yes, absolutely.
- (2) イ. Do they really?  
ロ. Is that all?  
ハ. Until when?  
ニ. Why not?
- (3) イ. Don't make fun of me.  
ロ. I don't agree with you.  
ハ. So do I.  
ニ. Thank you so much.
- (4) イ. Go ahead.  
ロ. I would prefer not to.  
ハ. That is correct.  
ニ. Yes, you will.
- (5) イ. No, I don't believe in love.  
ロ. Seeing is believing, you know.  
ハ. Sometimes, but not so often.  
ニ. You can say that again.
- (6) イ. I totally agree.  
ロ. I'm not so sure about that.  
ハ. No, it is true.  
ニ. Yes, I'm talking.

V. 次の空所(1)~(5)それぞれにもっとも適当な1語を補い、英文を完成せよ。解答は解答用紙の所定欄にしるせ。

A: Finally you're here! We thought you'd never ( 1 ) it. Is everything all right?

B: Sure, we're fine. Please accept our deepest apologies ( 2 ) arriving so late. We got a flat tire on the freeway, and it ( 3 ) us a while to put on the spare. Here we are. We hope we haven't inconvenienced you.

A: Don't give it a second thought. Better late ( 4 ) never.

B: Thanks for being so understanding. We almost called you to cancel our plans after we got the tire changed, but we decided to go ahead and come anyway.

A: You did the right thing. We would have been terribly disappointed ( 5 ) you hadn't come. Let's go on to the dining room and eat now.