

S 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20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。

Adults in the UK today are consuming more water now than in recent years, while in the US, sales of bottled water recently surpassed sales of soda. We've been flooded with messages telling us that drinking litres of water every day is the secret to good health, more energy, and great skin, and that it will make us lose weight and avoid cancer. Passengers are encouraged to take bottles of water onto the London Underground, pupils are advised to bring water into their lessons, and few office meetings can commence without a giant jug of water sitting in the middle of the table. Fuelling this thirst for water is the "8×8 rule": the unofficial advice recommending we drink eight 240ml glasses of water per day, totalling just under two litres, on top of any other drinks. That "rule", however, isn't backed by scientific findings—nor do UK or EU official guidelines say we should be drinking this much. Where did it come from? Most likely, it seems, from misinterpretations of two pieces of guidance—both from decades ago.

In 1945, the US Food and Nutrition Board of the National Research Council advised adults to consume one millilitre of liquid—not limited to only water—for every recommended calorie of food, which equates to two litres for women on a 2,000-calorie diet and two-and-a-half for men eating 2,500 calories. So this recommendation included most types of drinks as well as fruits and vegetables, which can contain up to 98% water. In 1974, meanwhile, the book *Nutrition for Good Health*, co-authored by nutritionists Margaret McWilliams and Frederick Stare, recommended that the average adult should consume between six to eight glasses of water a day. But, the authors wrote, this can include fruits and vegetables, soft drinks, and even beer.

Water is, of course, important. Making up around two-thirds of our body weight, water carries nutrients and waste products around our bodies, regulates our temperature, acts as a shock absorber in our joints, and plays a role in most chemical reactions happening inside us. We're constantly losing water through sweat, *urination, and breathing. Ensuring we have enough water is a fine balance, and crucial to avoiding **dehydration. The symptoms of dehydration can become detectable when we lose 1% to 2% of our body's water, and we continue to get worse

until we bring our fluids back up to normal. In rare cases, such dehydration can be fatal.

Years of unsupported claims around the 8×8 rule have led us to believe that feeling thirsty means we're already dangerously dehydrated. But experts largely agree that we don't need any more fluid than the amount our body signals for, when it signals for it. "The control of hydration is one of the most sophisticated things we've developed in evolution, ever since our ancestors crawled out of the sea onto land. We have a huge number of techniques we use to maintain adequate hydration," says Irwin Rosenberg, senior scientist at the Neuroscience and Aging Laboratory at Tufts University in Massachusetts.

In a healthy body, the brain detects when the body is becoming dehydrated and initiates thirst to stimulate drinking. It also releases a hormone which signals to the kidneys to save water by concentrating the urine. "If you listen to your body, it'll tell you when it's thirsty," says Courtney Kipps, medical director of Blenheim and London Triathlons. "The myth that it's too late when you're thirsty is based on the supposition that thirst is an imperfect marker of a fluid deficit, but why should everything else in the body be perfect and thirst be imperfect? It's worked very well for thousands of years of human evolution."

While water is the healthiest option since it has no calories, other drinks also hydrate us, including tea and coffee. Research indicates that tea and coffee contribute to hydration and so do alcoholic drinks. There's little evidence suggesting that drinking more water than our body signals for offers any benefits beyond the point of avoiding dehydration.

Still, research suggests there are some important benefits to avoiding even the early stages of mild dehydration. A number of studies have found, for example, that drinking enough to avoid mild dehydration helps support brain function and our ability to do simple tasks, such as problem-solving. Some studies suggest fluid consumption can help manage weight.

Brenda Davy, a professor of human nutrition, food and exercise at Virginia Polytechnic Institute and State University, has carried out a few studies looking at fluid consumption and weight. In one study, she randomly assigned subjects to one of two groups. Both groups were asked to follow a healthy diet for three months, but

only one was told to drink a 500ml glass of water half an hour before eating each meal. The group who drank the water lost more weight than the other group. Both groups were also told to aim for 10,000 steps a day, and those who drank the glasses of water better achieved this. Davy guesses this is because mild dehydration of around 1% to 2% is quite common, and many people may not realise when this happens—and even this mild level can affect our mood and energy levels.

Another alleged health benefit of drinking more water is improved and better moisturised skin. But there is a lack of evidence to suggest a credible scientific mechanism behind this. Those of us aiming for eight glasses of water per day aren't doing ourselves any harm. But the belief we need to drink more water than our bodies signal for can sometimes become dangerous. Too much fluid consumption can become serious when it causes a lack of salt in blood. This creates a swelling of the brain and lungs.

The idea that we must be constantly hydrated means many people carry water with them wherever they go, and drink more than their bodies require. “The maximum a person in the hottest possible heat in the middle of the desert might sweat is two litres in an hour, but that is really hard,” says Hugh Montgomery, director of research at the Institute for Sport, Exercise and Health in London. “The idea of carrying around 500ml of water for a 20-minute journey on the London Underground—you're never going to get hot enough to sweat at that rate, even if you're dripping with sweat.”

For those who feel more comfortable following official guidelines rather than thirst, the UK's National Health Service advises drinking between six to eight glasses of fluid a day, including lower fat milk, and sugar-free drinks, including tea and coffee. It's also important to remember that our thirst mechanisms lose sensitivity once we're over 60. “As we age, our natural thirst mechanism becomes less sensitive and we become more likely to get dehydrated than younger people. As we age, we may need to be more attentive to our fluid consumption habits to stay hydrated,” says Davy. Most experts agree that our fluid requirements vary depending on a person's age, body size, gender, environment, and level of physical activity.

“One of the problems of the 8×8 rule is its stark over-simplification of how we

as organisms respond to the environment we're in," says Rosenberg. "We ought to think of fluid requirement in the same way as energy requirement, where we talk about the temperature we're experiencing and level of physical activity we're engaged in." Most experts tend to agree we don't need to be concerned about drinking a fixed amount of water per day: Our bodies signal to us when we're thirsty, much like they do when we're hungry or tired.

*urination : 排尿

**dehydration : 脱水状態

1. The main purpose of the first paragraph is to
 - イ. review the health benefits of drinking adequate amounts of liquid.
 - ロ. discuss the history of water consumption in the UK.
 - ハ. explain the official guidelines concerning daily consumption of liquid.
 - ニ. raise a challenge to the common belief about water consumption.

2. The passage suggests that advice from the US Food and Nutrition Board and from the book, *Nutrition for Good Health*,
 - イ. has not been interpreted correctly.
 - ロ. is the basis of all current research on water consumption.
 - ハ. is logically incorrect.
 - ニ. has had little influence on patterns of water consumption.

3. All of the following are true about water consumption EXCEPT that
 - イ. our bodies need water for a wide variety of physical functions.
 - ロ. we lose body water through our normal day-to-day activities.
 - ハ. our bodies consist of up to 90% water.
 - ニ. we can get water from many kinds of foods and liquids.

4. The passage suggests that the ability to feel thirst is
- イ. not as reliable as other bodily functions.
 - ロ. well designed by evolution.
 - ハ. different in humans than in other animals.
 - ニ. often harmed by sugary drinks or caffeine.
5. Brenda Davy's research suggests that keeping the body properly hydrated may lead to
- イ. weight loss.
 - ロ. lower energy.
 - ハ. depression.
 - ニ. a healthier diet.
6. The underlined word "alleged" (paragraph 9) is closest in meaning to
- イ. definite.
 - ロ. historical.
 - ハ. positive.
 - ニ. supposed.
7. In the underlined passage "but that is really hard" (paragraph 10), "that" refers to
- イ. drinking more than our bodies require.
 - ロ. sweating two litres in an hour.
 - ハ. staying constantly hydrated.
 - ニ. being in the middle of the desert.
8. The underlined word "stark" (paragraph 12) is closest in meaning to
- イ. doubtful.
 - ロ. negative.
 - ハ. obvious.
 - ニ. recent.

9. One theme of the passage is that, when it comes to drinking water,
- イ. all people should drink the same basic amount.
 - ロ. modern lifestyles make it difficult to drink enough.
 - ハ. scientific researchers have little advice to offer.
 - ニ. we should trust our bodies to tell us what we need.
10. The most appropriate title for this passage is
- イ. How Much Water Should You Drink a Day?
 - ロ. Water, Tea, and Coffee: The Secret to Good Health.
 - ハ. How Do Our Bodies Make Use of Water?
 - ニ. Water Consumption and the Failure of Official Guidelines.

- 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。

A brand-new baby is already deeply connected to other people, but that's not all that goes on in the baby's world. Babies love human voices and faces more than anything, but they also love stripes and edges. Babies only a few days old will gaze with focused, cross-eyed intensity at the corner of the ceiling or a striped shopping bag while they ignore all the expensive toys, with their bright colors and soft prints, that grandma brought along. You can show babies different kinds of pictures and see where they look. Babies will turn toward complex patterns of high contrast and away from simple patterns with little contrast. Game boards like those used for chess and checkers as well as targets such as those used in darts appear to be at the peak of newborn sensibility. In fact, manufacturers of baby toys have taken advantage of this research: The patterns on some toys designed for very young babies are often taken straight from the pages of academic developmental psychology journals.

Why do babies love stripes? It turns out that this question is as important to scientists as it is to toy makers because it helps answer another question: How do we divide up the continuous visual image in front of us into separate things? When you look at the book in front of you, how do you know where to draw the line between the book and the background of the desk behind it, or the edge of the hand that is holding it? Although this might seem like a simple ability, in fact, the most sophisticated computer vision systems have a very hard time doing it.

Images such as stripes, where there is a sharp contrast between the brightness and texture of two surfaces, are important because they usually indicate where objects begin and end. If you hold a book up against a background, you'll see that the areas of greatest contrast in the image you see, the edges, correspond to the real boundaries of the book. If you give young babies a complicated picture and record their eye movements as they look at the scene, you'll see them tracing the outside edges of objects. Newborns are already organizing the world into a bunch of different things. Paying attention to edges is the best way of dividing a static picture into separate objects.

But, of course, the baby's world isn't static. Even in the hospital room, things are constantly moving. And even newborns will follow a moving object with their eyes. Movement provides even better signals about where objects begin and end than do just edges alone. Imagine a baby looking at a doll lying on a blanket filled with bunny images. The doll may have a number of different parts, each of which has specific edges—the head is visually separate from the body, which is separate from the feet. In the same way, each of the bunnies on the blanket also has its own separate edge. But if you pull the blanket out from under the doll, all the blanket's edges will move together, and they will move on a different path from all the parts of the doll. Thus, when things move together on the same path, they must be part of the same object.

Young babies not only can follow the movements of an object in front of them, they seem to be able to predict how an object will move in the future. Suppose you show the babies an object following a particular path at a particular speed—say, a ball rolling on the table. Now the ball rolls behind a screen. They will look ahead to the far edge of the screen, to the place where the object ought to appear if it keeps moving at the same rate and on the same path. If the object does appear there, the babies are unperturbed and keep following the object. But if the object doesn't appear there, or if it appears at the wrong spot or too quickly or too slowly, they look intently at the edge of the screen for much longer. Sometimes, in fact, they look back to the other edge of the screen, or look farther ahead along the path the object should have taken. They seem able to predict where the object should be and when it should get there.

Objects have edges and objects move, but another important thing to know about objects, and the space that they inhabit, is that they are three-dimensional. One of the classic philosophical debates of the eighteenth and nineteenth centuries was about how we turn the two-dimensional, flat image projected into our brain through our eyes into a three-dimensional understanding of the world. The British philosopher Bishop Berkeley argued that we had to learn that space was three-dimensional by coordinating our visual experience and our physical experience of moving through the world. Berkeley thought that touch was the only sense that gave us direct information about distance and solidness of objects; somehow that

information had to be associated with the two-dimensional information we got from vision.

Babies demonstrate that Berkeley was wrong. For one thing, even tiny babies who can't yet walk or crawl act in ways that indicate they understand distance. If you show babies a "looming" ball—a ball that looks as if it's rapidly approaching them—the babies will shrink back and even put their hands protectively in front of them. In much the same way, if you show babies a very interesting toy within arm's reach, they'll extend their arms toward it, even though they're far too little to grab it successfully. When they're a bit older, they'll reach toward a toy that is within reach, but not toward a toy that's out of reach.

Another English philosopher, John Locke, posed another classical problem. What would happen if you miraculously restored the sight of someone who had been blind from birth? Would that person recognize all the objects she had known only through touch, or would she have to painstakingly learn, for example, that the smooth, hard, curved surface looked like a teacup? Locke thought that the blind person would have to learn to make connections between the two types of experience.

Babies show that Locke, like Berkeley, got it wrong. Andy Meltzoff gave one-month-old babies one of two *pacifiers to suck on, a smooth one and one with bumps on it. The babies never saw the pacifiers. They just felt them. Then he let the babies look at smooth and bumpy objects, without letting them feel them. The babies looked longer at the object that was the same shape as the one they had just been sucking on. Somehow, they could relate the feel of the pacifier in their mouths with its visual image.

So in the first few months of life, babies already seem to have solved a number of deep philosophical mysteries. They know how to use edges and patterns of movement to divide the world into separate objects. They know something about how those objects characteristically move. They know that those objects are part of a three-dimensional space. And they know the relationship between information that comes from their different senses—they can link the feel of a pacifier and its shape.

*pacifier : おしゃぶり

1. Among the following, the object a newborn baby is LEAST likely to focus on is
- ㄱ. a toy zebra.
 - ㄴ. their mother's face.
 - ㄷ. a bouquet of colorful flowers.
 - ㄹ. a green curtain.
2. The passage suggests that distinguishing objects in the environment is
- ㄱ. easy for digital vision systems.
 - ㄴ. a matter of finding areas of contrast.
 - ㄷ. hard when the objects are moving.
 - ㄹ. a skill that newborns don't have.
3. The author gives the example of a doll lying on a bunny blanket to show that
- ㄱ. movement makes it easier to distinguish objects from one another.
 - ㄴ. newborns are more interested in the edges of objects than their movement.
 - ㄷ. movement is confusing to newborns, who prefer quiet surroundings.
 - ㄹ. newborns feel most comfortable with toys and blankets with faces on them.
4. If a baby sees a toy train disappear into a tunnel, they are likely to
- ㄱ. expect it to come out on the other end.
 - ㄴ. become upset and start crying.
 - ㄷ. wait for it to come back out of the entrance.
 - ㄹ. lose interest and play with another toy.
5. The underlined word "unperturbed" (paragraph 5) is closest in meaning to
- ㄱ. bored.
 - ㄴ. calm.
 - ㄷ. confused.
 - ㄹ. nervous.

6. In contrast to Bishop Berkeley's ideas, research shows that babies
- イ. like to explore their environment and touch new objects.
 - ロ. need to crawl around to understand the concept of distance.
 - ハ. do not fear big objects that are coming closer to them.
 - ニ. do not need to touch things to know that they are three-dimensional.
7. The underlined word "painstakingly" (paragraph 8) is closest in meaning to
- イ. boldly.
 - ロ. carefully.
 - ハ. dangerously.
 - ニ. uncomfortably.
8. The results of Andy Meltzoff's study show that one-month-old babies
- イ. could easily relate the visual image of an object with the feeling of it.
 - ロ. responded with equal interest to both smooth and bumpy objects.
 - ハ. had trouble associating an actual object to its visual image.
 - ニ. behaved in a manner consistent with John Locke's ideas.
9. The author would probably agree with all of the following EXCEPT that
- イ. a stimulating environment for newborns does not require fancy toys.
 - ロ. scientific research can help to prove or disprove the ideas of philosophy.
 - ハ. it's hard to study young babies because they don't use language yet.
 - ニ. babies are born with abilities to understand their environment.
10. The most appropriate title for this passage is
- イ. How Infants Learn and Grow.
 - ロ. The Difference Between Newborns and Adults.
 - ハ. Recent Research on Child Psychology.
 - ニ. How Babies Make Sense of the World.

8. The dance team gave an () performance in the international competition, which earned them first prize.

イ. absolute ロ. awkward ハ. outspoken ニ. outstanding

9. The company president () his anger in an unprecedented manner.

イ. expressed ロ. impressed ハ. posed ニ. pushed

IV. 次の空所(1)～(6)を補うの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。

A. After-school programs

Roger: Excuse me, but you're the director of the after-school programs, right?

Sarah: Yes, that's right. (1)?

Roger: Well, I'm currently doing research on how such activities develop a child's social behavior.

Sarah: (2) Is there some way that we could work together?

Roger: That is precisely what I was going to suggest. Can we set a time to meet?

Sarah: Actually, my colleagues and I were planning on meeting tomorrow morning to discuss this very topic. Could you join us? We'll start at 10 a.m.

Roger: Yes, I can make it. (3)?

Sarah: On the fourth floor. Just come to my office. Here's my card.

Roger: Great. I'll see you tomorrow!

- (1) イ. What's your name
ロ. What's your school
ハ. How can I help you
ニ. How are you

- (2) イ. Is that right?
ロ. Can you start tomorrow?
ハ. I'm sure.
ニ. I agree with your suggestion.

- (3) イ. How should I get there
ロ. What should I bring
ハ. Do you usually meet then
ニ. Will you meet in this building

B. Living and studying in a different country

Terence: You said that you just moved back to Tokyo, isn't that right?

Masako: Yes, last month. I was living in England, but I came back because I wanted my son to grow up bilingually, like me.

Terence: So, does he speak any Japanese?

Masako: (4), but he rarely speaks in Japanese. He even calls me "Mum."
He's starting school soon, so I hope he can manage.

Terence: (5) I wonder how the other children will react to him.

Masako: I'm a bit worried about the teachers, actually. If they aren't supportive, he'll probably feel really lonely.

Terence: If things don't go well, is there any chance that you might move back to England?

Masako: (6). My husband and I both gave up our jobs, and we moved everything here. Going back may be possible, but not very likely.

- (4) イ. Once in a while
□. He understands me
ハ. If you know what I mean
ニ. I'm not sure

- (5) イ. He must be very happy!
□. You must have been surprised!
ハ. Doesn't he miss his British home?
ニ. Do you think he'll have trouble fitting in?

- (6) イ. I don't think so
□. It's for the best
ハ. I'm thinking about it
ニ. Yes, of course

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。

Andrew Carnegie didn't become one of the richest men in the world (1) to luck. One of the reasons for his massive success was his ability to make people like him. How did he do it? Let me share with you one not-so-well-known story about Mr. Carnegie.

What was the reason for Andrew Carnegie's success? He was called the Steel King, yet he himself knew (2) about the manufacture of steel. He had hundreds of people working for him who knew far more about steel than he did. But he knew how to handle people, and that is what made him rich. Early in life, he showed a talent for organization and a genius for leadership. By the time he was ten, he had discovered the great importance people place on their own name. And he used that discovery to win cooperation. To illustrate: When he was a boy back in Scotland, he (3) hold of a rabbit, a mother rabbit. He soon had a whole nest of little rabbits—and nothing to feed them. But he had a brilliant idea. He told the boys and girls in the neighborhood that if they would go out and pull enough clover and dandelions to feed the rabbits, he would name the babies (4) them. The plan worked like magic, and Carnegie never forgot it.

Years later, he made millions by using the (5) psychology in business. For example, he wanted to sell steel rails to the Pennsylvania Railroad. J. Edgar Thomson was the president of the Pennsylvania Railroad then. So Andrew Carnegie built a huge steel mill in Pittsburgh and called it the "Edgar Thomson Steel Works."

【以下余白】

