

# 英語問題

10:00~11:30 (90分)

## 受験についての注意

1. 試験開始の合図があるまで、問題を見てはいけません。
2. 英語の試験用紙は、問題用紙1部(16ページ)、マーク式解答用紙1枚から構成されています。過不足があれば監督者に申し出てください。
3. 試験中に試験用紙の印刷の不鮮明、ページの欠落、乱れおよび解答用紙の汚れなどに気づいた場合は、監督者に申し出てください。
4. 監督者の指示に従って、マーク式解答用紙の受験番号の記入欄に受験番号を1カ所記入し、さらにその下のマーク欄にマークしてください。また、氏名欄に氏名を1カ所記入してください。
5. 解答はすべてHBの黒鉛筆またはHBで0.5mm以上の芯のシャープペンシルで記入してください。
6. 解答用紙は丁寧に取り扱いください。  
(マーク式解答用紙は折り曲げたり、破ったり、汚したりしないよう、特に注意してください。)
7. 解答は解答用紙の各問指定の枠内に記入してください。解答用紙の裏面にはいっさい記入してはいけません。下書きなどには問題用紙の余白を利用してください。
8. 解答中以外の解答用紙は必ず裏返しに置いてください。
9. 受験中は不審な行動をとってはいけません。不正行為があれば当該年度の全入学試験を無効とします。
10. 試験時間の途中で退場することはできません。  
ただし、気分が悪いなど身体の調子が悪くなった場合は、手を挙げて監督者に申し出てください。
11. 試験終了の合図と同時に解答をやめてください。
12. 問題用紙は試験終了後、持ち帰ってください。

### マーク式解答用紙の記入上の注意

#### 1. 受験番号の記入方法

受験番号は受験番号欄にアラビア数字で記入のうえ、  
受験番号マーク欄に下の例に示すようにマークしてください。

【例】受験番号が00012番のときは、

| 受 験 番 号 |    |    |    |       |
|---------|----|----|----|-------|
| P       | 0  | 0  | 0  | 1 2   |
|         | 万位 | 千位 | 百位 | 十位 一位 |
|         | 0  | 0  | 0  | 0 0   |
|         | ①  | ①  | ①  | ① ①   |
|         | ②  | ②  | ②  | ② ②   |
|         | ③  | ③  | ③  | ③ ③   |
|         | ④  | ④  | ④  | ④ ④   |
|         | ⑤  | ⑤  | ⑤  | ⑤ ⑤   |
|         | ⑥  | ⑥  | ⑥  | ⑥ ⑥   |
|         | ⑦  | ⑦  | ⑦  | ⑦ ⑦   |
|         | ⑧  | ⑧  | ⑧  | ⑧ ⑧   |
|         | ⑨  | ⑨  | ⑨  | ⑨ ⑨   |

#### 2. マークの記入方法

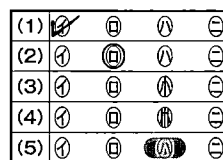
次に示す㊸「正しい例」のようにマークし、㊹「悪い例」のようにマークしてはいけません。

##### ㊸ 正しい例



例えば口と解答したい場合、  
㊸のマーク枠の中を完全に  
ぬりつぶしてください。

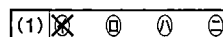
##### ㊹ 悪い例



✓印をつける  
○印でかこむ  
線を引く  
ぬりつぶしが不完全  
範囲をおおきくこえる

このような  
マークをし  
てはいけま  
せん。

#### 3. 一度記入したマークを訂正する場合、消しゴムで完全に消してからマークしなおしてください。



左図のように×印をつけても  
消したことにはなりません。

#### 4. 正しくマークされていない場合、採点できないことがあります。

## 解答はすべて別紙の解答用紙に記入しなさい

[ I ] 次の英文を読み、下記の設問 (A~C) に答えなさい。

I first became aware of ‘the Durham trials’ when I saw on the news that a trial of fish-oil pills was being planned for 5,000 children in Durham, UK. These 5,000 children were in their GCSE\* year. The plan was to give them all six fish-oil pills a day. After that, their exam results would be compared to the local education board’s forecast of their performance if they had not taken the pills. There was no ‘control’ group\*\* to compare against, like a group of children taking placebo capsules\*\*\* without fish-oil in them. Nothing.

By now, you probably already realize that this is a silly and especially wasteful way to conduct a study on a pill that is supposed to improve school performance, with one million pounds worth of generously offered capsules and 5,000 children (ア) at your disposal. Let me explain first. If we can understand the trial’s theory from the beginning, it will be easier to see what is wrong with it.

If you divide a group of kids in half, and give a placebo capsule to one group, and the real capsule to ( 1 ), you can then compare how well each group does, and see whether it was the ingredients in the pill that made the difference to their performance, or just the fact of taking a pill and being in a study. Why is this important? Because you have to remember that whatever you do to children, in a trial of a pill to improve their performance, their performance will always improve.

Firstly, children’s skills improve (イ) over time anyway: they grow up, time passes, and they get better at stuff. You might think you’re clever, sitting there with no nappy\*\*\*\* on and reading this article, but things haven’t always been that way, as your mother could tell you.

Secondly, the children—and their parents—know that they are being given these pills to improve their performance, so they will ( 2 ) a placebo effect. I made this point previously in this book, because I think the real scientific story of the connections between body and mind is much more interesting than anything made up by the (ウ) miracle-cure community, but here it is sufficient to remind you that the placebo effect is very powerful by itself: consciously or unconsciously, the children will expect themselves to improve, and ( 3 ) will their parents and their teachers. Children are very sensitive to our expectations of them, and anyone who doubts that fact (エ) should not be allowed to have a parenting permit.

Thirdly, children will do better just from being in a special group that is being studied, observed and closely watched, since it seems that the simple fact of being in a trial improves your performance, or recovery from illness. This phenomenon is called the 'Hawthorne effect,' not after a person, but after the factory where it was first observed. In 1923 Thomas Edison, the inventor of the light bulb, was <sup>(オ)</sup>chairing the committee on lighting efficiency. Various reports had suggested that better lighting might increase productivity, so a researcher called Deming went with his team to test the theory at Western Electric's Hawthorne ( 4 ) at Cicero, Illinois.

I will explain what happened in a simple way. When the researchers increased light levels in the factory, they found that performance improved. But when they reduced the light levels, performance improved then, too. In fact, they found that no matter what they did, productivity ( 5 ) anyway. This finding was very important: when you tell workers they are part of a special study to see what might improve productivity, and then you do something ... they improve their productivity. This is a kind of placebo effect, because the placebo is not about the mechanics of a sugar pill, but it is about the cultural meaning of helping or stepping in, which includes, among other things, your expectations, and the expectations of <sup>(カ)</sup>the people attending to you and measuring you.

\*GCSE : イギリスの16歳の生徒が受験する中等教育修了一般資格試験

\*\*control group : 統制群、実験において比較のために処置を受けないグループ

\*\*\*placebo capsule : 実験の対照として用いられる偽薬のカプセル

\*\*\*\*nappy : おむつ

Based on Ben Goldacre, *Bad Science*. (2008)

## 設 問

A. 本文中の空所（1～5）に入れるのに最も適当なものを、それぞれ下記（a～d）の中から1つ選び、その記号をマークしなさい。

- (1) a. the others      b. the other      c. other      d. others  
(2) a. be far from      b. lack      c. forget      d. be subject to  
(3) a. neither      b. nor      c. so      d. such  
(4) a. plant      b. corner      c. school      d. theater  
(5) a. decreased      b. weakened      c. increased      d. was the same

B. 本文中の下線部（ア～カ）が文中で表している内容に最も近いものを、それぞれ下記（a～d）の中から1つ選び、その記号をマークしなさい。

(ア) at your disposal

- a. available to you      b. favorably disposed toward you  
c. comfortable with you      d. valuable to you

(イ) over time

- a. accidentally      b. gradually      c. immediately      d. eternally

(ウ) miracle-cure community

- a. a group of scientists who test new medicine in a laboratory  
b. a group of people who believe in medical treatments which lack proof  
c. a group of doctors who work in a hospital and treat patients  
d. a group of students who study health and medicine at university

(エ) should not be allowed to have a parenting permit

- a. should be asked to explain their parental decision  
b. should be given a chance to raise children  
c. should be respected for their parental effort  
d. should be banned from raising children

(オ) chairing the committee

- a. discussing in earnest
- b. in the middle of the table
- c. seated in the conference room
- d. in charge of the panel

(カ) the people attending to you

- a. those who agree with you
- b. the people who look after you
- c. those who judge you
- d. the people who sit beside you

C. 次の問い (i ~ iii) の答えとして最も適当なものを、それぞれ下記 (a ~ d) の中から1つ選び、その記号をマークしなさい。

(i) Which of the following is true about children's performance in medical trials?

- a. Children given a placebo capsule will not show any improvement.
- b. Only real pills can improve children's performance.
- c. Taking any pills can lead to children's performance improving.
- d. The ingredients of the pills always determine performance.

(ii) Which of the following is true about the 'Hawthorne effect'?

- a. People work harder when they are given more physical comfort, like better lighting.
- b. People's performance decreases when they are given a lot of attention.
- c. People perform worse when they know they are part of a scientific trial.
- d. People improve their performance simply because they are being observed or studied.

(iii) Which of the following would the author be likely to agree with?

- a. The Durham trials were well-designed because they gave fish-oil pills to a large number of students without needing a control group.
- b. Children try to meet only the parents' expectations, and not those of people around them.
- c. If you tell workers they are part of a special study to improve productivity, their performance increases.
- d. The placebo effect only works through physical mechanisms and is not influenced by psychological factors.

〔Ⅱ〕 次の英文を読み、下記の設問（A～C）に答えなさい。

Infections have dominated the history of human disease, and at times they have dominated history itself. The Black Death\* swept across the world in the fourteenth century, from its probable origins in China to its peak in Europe, where it reduced the population by an estimated 30 to 60 percent. In 1918 the infectious disease, sometimes (ア) referred to as the 'Spanish flu,' spread across many countries and is estimated to have killed ( 1 ) least 50 million people worldwide. Infectious diseases have the potential to spread rapidly from human, animal or environmental sources. This can lead to small local outbreaks\*\*, larger regional outbreaks, or very large worldwide outbreaks, which makes them a unique threat. On a global scale, infections are still the leading cause of people getting sick and dying, particularly because of their impact ( 2 ) lower-income countries such as in Africa and South East Asia, but also because of the long-term disability that they can cause in richer countries, through healthcare-associated infections and the consequences of virus infections.

Antimicrobials\*\*\* are a group of drugs that provide us with the weapons to fight these important causes of disease, disability and death. Their discovery and use through the second half of the twentieth century has had a deep effect on human health and has been essential to modern medical advances such as the treatment of cancer. However, (イ) we are now at a crossroads in the journey towards the defeat of infection as a cause of disease, as our use of these valuable drugs is not only becoming threatened by the rising challenge of resistance among the infections they are used to treat, ( 3 ) also as we recognize that their careless use can cause harm in its own right.

Infectious diseases are caused by tiny organisms that can be found living in or on plants and animals, and also in the places where there is no life, such as in water and soil. These tiny organisms range from viruses and bacteria\*\*\*\*, to a one-celled organism which is often found in water and can cause illness. Although the majority of these organisms are too small to be seen with the naked eye, and they lack the complexity of higher life forms, they nevertheless share with humans and other animals many of the building blocks for life, such as DNA, which store genetic information and help make proteins\*\*\*\*\* that build and run the body. This sharing of building blocks (ウ) limits the opportunities for treatment, since treatments need to be able to kill such tiny organisms by interfering ( 4 ) their structure or the way they produce energy and carry out life

processes, but not with the cells of the human (or animal, fish, insect, plant, etc.) that they are ( 5 ).

\*the Black Death : 黒死病

\*\*outbreak : 突発的な発生

\*\*\*antimicrobial : 抗菌薬

\*\*\*\*bacteria : バクテリア

\*\*\*\*\*protein : タンパク質

Based on Sally Davies, Jonathan Grant and Mike Catchpole,  
*The Drugs Don't Work: A Global Threat* (2013)

## 設 問

A. 本文中の空所 (1~5) に入れるのに最も適当なものを、それぞれ下記 (a~d) の中から1つ選び、その記号をマークしなさい。

- |     |           |             |              |              |
|-----|-----------|-------------|--------------|--------------|
| (1) | a. at     | b. by       | c. in        | d. on        |
| (2) | a. at     | b. by       | c. on        | d. through   |
| (3) | a. but    | b. however  | c. if        | d. moreover  |
| (4) | a. by     | b. on       | c. to        | d. with      |
| (5) | a. infect | b. infected | c. infecting | d. infection |

B. 本文中の下線部 (ア~ウ) の文中での意味に最も近いものを、それぞれ下記 (a~d) の中から1つ選び、その記号をマークしなさい。

- (ア) referred to as  
a. called                      b. discussed                      c. handed in                      d. divided as

(イ) we are now at a crossroads in the journey towards the defeat of infection

- a. we have succeeded in taking important steps on the path toward fighting infection, showing that real solutions are possible
- b. progress in defeating infection has stopped, and we are now unable to advance further
- c. controlling infection has reached a critical stage that will determine whether we can really overcome it
- d. there are crossroads that remind us how complex the fight against infection can be

(ウ) limits the opportunities for treatment

- a. helps doctors find the best treatment faster
- b. leads to more choices for curing the illness
- c. prevents patients from catching diseases
- d. makes it harder to find effective treatments

C. 次の英文 (a～f) の中から本文の内容と一致するものを2つ選び、その記号を各段に1つずつマークしなさい。ただし、その順序は問いません。

- a. In China, where the Black Death is considered to have originated, the disease reduced the population by some 30 to 60 percent.
- b. Infectious diseases cause problems only in lower-income countries.
- c. Antimicrobials are useless for fighting infectious diseases.
- d. Infectious diseases are gaining resistance to the drugs that were formerly effective against them.
- e. Tiny organisms have the complexity of higher life forms.
- f. Tiny organisms causing illness are difficult to kill because humans and animals have common building blocks for life with the infectious organisms.

〔Ⅲ〕 次の英文を読み、下記の設問（A～C）に答えなさい。

Although the vast majority of robots in the world today—including those in research labs—are not humanoid, <sup>(7)</sup>robots made in our likeness hold a special fascination. This is perhaps not surprising given that the word ‘robot’ was first used to describe a fictional humanoid robot. But <sup>(1)</sup>fiction aside, there are good reasons why robots that need to work with people might have to be humanoid: first, so they can use human tools and share human workspaces; and second, to be able to communicate naturally with humans (for instance, through speech, facial expressions, and gestures).

A robot is described as humanoid if it has a shape or structure that to some degree copies the human form. <sup>(2)</sup>Thus a robot head, with two vision sensors in approximately the correct place for eyes, positioned above a trunk, would be regarded as humanoid. If the robot has arms, then these would similarly need to be humanoid, attached by the shoulders to the trunk, with hands or grippers that resemble hands.

For a robot to be called humanoid, its form is more important than the detail of its components. If it has legs, for instance, it must be two-legged with some kind of hip joint, knee joint, and ankle joint—even if the legs may bear very little anatomical\* resemblance to their human counterparts. Most humanoid robots are decidedly mechanical in their appearance and <sup>(1)</sup>if formed of plastic components they may appear more like animation people or even animation impressions of what robots should look like.

A certain type of humanoid robot does, however, attempt a greater degree of accuracy to the human form and appearance, and these are referred to as *android*. They have artificial skin and hair, make-up and clothes, but like so many science fiction robots, <sup>(3)</sup>peel away their artificial skin and underneath are the circuit boards and motors of the robots. Except that these robots are real, the closest yet to what is for many the ultimate goal of robotics\*\*: artificial people. Unfortunately, or perhaps fortunately, depending on your <sup>(4)</sup>point of view, today’s android robots—although impressive on the surface—are far short of that dream.

In short, the problem is this: we can build the bodies but not the brains. Robot intelligence technology is behind robot mechatronics\*\*\*—and <sup>(5)</sup>nowhere is the gap between the two so evident as it is in android robots. The problem is that if a robot looks realistically human, then we quite reasonably expect it to behave like a human. For this reason, whole-body android robots are, at the time of writing, disappointing.

\*anatomical : 解剖学上の

\*\*robotics : ロボット工学

\*\*\*mechatronics : 機械電子工学

Based on Alan Winfield, *Robotics* (2012)

## 設 問

A. 本文中の下線部 (1~4) を置き換えるものとして最も適当なものを、それぞれ下記 (a~d) の中から1つ選び、その記号をマークしなさい。

(1) fiction aside

a. along with fiction

b. adding to fiction

c. regardless of fiction

d. in opposition to fiction

(2) Thus

a. Therefore

b. Though

c. Instead of

d. In contrast

(3) peel away

a. paint well

b. take off

c. give up

d. look for

(4) point of view

a. perspective

b. sightseeing

c. discussion

d. definition

B. 本文中の二重下線部（ア～ウ）が文中で表している内容に最も近いものを、それぞれ下記（a～d）の中から1つ選び、その記号をマークしなさい。

(ア) robots made in our likeness hold a special fascination

- a. Some people are very interested in humanoid robots.
- b. The majority of people are less interested in robots.
- c. Special robots are very similar to humans.
- d. Many people like robot technology.

(イ) if formed of plastic components they may appear more like animation people or even animation impressions of what robots should look like

- a. By using plastic materials, humanoid robots will probably impress people.
- b. The humanoid robots made of plastics resemble animation characters in their appearance.
- c. Humanoid robots are made of plastic so that they are less like animation impressions.
- d. Although plastic components are used in humanoid robots, the majority of people willingly choose to use them.

(ウ) nowhere is the gap between the two so evident as it is in android robots

- a. There is no place in android robots where the gap between robot intelligence technology and robot mechatronics exists.
- b. The bodies and brains of android robots are too complex for us to manufacture.
- c. The difference between robot intelligence technology and robot mechatronics is clearly evident in android robots.
- d. The problem of robot intelligence technology and robot mechatronics is caused by android robots.

C. 次の問い ( i、ii ) の答えとして最も適当なものを、それぞれ下記 ( a～d ) の中から 1つ選び、その記号をマークしなさい。

( i ) Which of the following is true about humanoid robots?

- a. The fact that a robot is humanoid is not particularly useful when it is working with people in the same place.
- b. If a robot is humanoid, it should have two vision sensors in the middle of the trunk.
- c. In order to be recognized as humanoid, the shape of a robot is more crucial than its component details.
- d. Even if a robot has three arms, as long as they are attached by shoulders to the trunk, it is still considered humanoid.

( ii ) Which of the following is NOT true about android robots?

- a. Some humanoid robots, which are called android, look much more like real humans than other robots.
- b. Android robots have artificial skin and hair, but beneath their skin they have circuit boards and motors just like other robots.
- c. In android robots, a clear gap can be observed between robot intelligence and robot mechatronics.
- d. It is quite natural that when people see a robot resembling a human, they do not necessarily expect it to behave like a human.

[IV] 次の英文(1~10)の空所に入れるのに最も適当なものを、それぞれ下記(a~d)の中から1つ選び、その記号をマークしなさい。

- (1) I'll stay at home if it (            ) tomorrow.  
a. rain                      b. rains                      c. rained                      d. will rain
- (2) The museum in this town (            ) for the last five years.  
a. closes                      b. closed                      c. is closed                      d. has been closed
- (3) Do you have something (            ), like a pen or pencil?  
a. to write                      b. to write for                      c. to write with                      d. to write on
- (4) It is well-known that children (            ) by bilingual parents naturally learn two languages.  
a. bringing up                      b. brought up  
c. have brought up                      d. were brought up
- (5) Mary brought me a present from France, (            ) she traveled during her summer vacation.  
a. why                      b. what                      c. who                      d. where
- (6) "Do you mind if I ask you a favor?" "(            ). What is it?"  
a. Thank you                      b. I think so  
c. No, not at all                      d. No, I do
- (7) Ensure you wake up early tomorrow, (            ) you'll be late for work again.  
a. and                      b. but                      c. or                      d. so
- (8) Fred thought that movie was (            ), but in my opinion, it wasn't.  
a. interest                      b. interested                      c. interesting                      d. interestingly
- (9) My late father used to say that (            ) along with people is more important than anything else.  
a. getting                      b. fetching                      c. bringing                      d. touching
- (10) I was (            ) by illness from attending my friend's birthday party.  
a. forced                      b. prevented                      c. brought                      d. caught

[V] 次の日本文(1~5)に相当する意味になるように、それぞれ下記(a~h)の語句を並べ替えて正しい英文を完成させたとき、並べ替えた語句の最初から2番目と6番目に来るものの記号をマークしなさい。ただし、文頭に来る語も小文字で始めています。

(1) Tim は、正直だが辛辣な意見で誰かを傷つけるのを恐れて黙っていた。

Tim ( ) his honest but harsh opinion.

- a. fear                      b. with                      c. offending                      d. kept  
e. of                      f. anyone                      g. for                      h. silent

(2) 私は手紙を彼に書いて、口論中に自分の言ったことを謝った。

I wrote him a letter, ( ).

- a. during                      b. the                      c. apologizing                      d. argument  
e. I                      f. what                      g. for                      h. said

(3) ケンがくれた地図がなかったら、東京で完全に道に迷っていたでしょう。

( ) me, I'd have gotten completely lost in Tokyo.

- a. been                      b. for                      c. Ken                      d. the map  
e. it                      f. had                      g. gave                      h. not

(4) 定期的に運動をしないと、夜遅くにテレビを見ながら間食することで、体重が増えるかもしれない。

( ) from watching TV and snacking late at night.

- a. weight gain                      b. regular                      c. of                      d. might  
e. result                      f. exercise                      g. lack                      h. in

(5) 先生は明日のテストに、なに色のペンを持ってくるように言っていましたか。

( ) bring for tomorrow's exam?

- a. the teacher                      b. color                      c. we                      d. did  
e. should                      f. pen                      g. what                      h. say

[VI] 次の会話文を読み、空所（1～10）に入れるのに最も適当なものを、それぞれ下記（a～d）の中から1つ選び、その記号をマークしなさい。

*Sara is not happy after coming back from shopping, so Shota asks her some questions.*

*Sara:* Why does it always feel like everything and everyone is ( 1 ) me?

*Shota:* What makes you say that?

*Sara:* I went to the store, and it was ( 2 ). Everyone was in my way, the line took forever, people were cutting in, and then it started raining! It's like the whole world hates me.

*Shota:* Why were so many people at the store?

*Sara:* It was around 5 p.m. Everyone was just ( 3 ) work and stopping by to grab stuff.

*Shota:* Then why did you go shopping at that time?

*Sara:* I had to finish a comic before five so I couldn't go out earlier.

*Shota:* Why were you late finishing your comic?

*Sara:* I only started reading it at one, because I slept until twelve.

*Shota:* Why did you get up so late?

*Sara:* Uh... I was playing a video game until 3 a.m. I work hard every day! Can't I relax ( 4 )?

*Shota:* You can, but the problem for you is: how do you balance work and relaxation without it driving you mad? Or, in six words: ( 5 )

*Sara:* Good question. My mom would say, "Be calm, stay clean, and ( 6 ) a schedule." But what does that mean? I usually perform well under pressure. So what works for me?

*Shota:* The times you could relax most were those when you had ( 7 ) your deadlines.

*Sara:* True. And I actually handle deadlines better when I make a simple plan—like writing down the steps I need to take. Then I just focus on one step ( 8 ), and after I finish each one, I give myself a short break. That way, I don't feel ( 9 ).

*Shota:* That's right! ( 10 ) helps keep things balanced.

*Sara:* Exactly.

*Shota:* Great conclusion!

- (1) a. for                      b. against                      c. through                      d. over
- (2) a. quiet                      b. clean                      c. crowded                      d. closed
- (3) a. getting at                      b. getting on                      c. getting to                      d. getting off
- (4) a. once in a while                      b. at once  
c. all at once                      d. once upon a time
- (5) a. What do you want for dinner?                      b. When do you tell your mom?  
c. How do you balance your life?                      d. How do you get your friends?
- (6) a. forget                      b. give up                      c. keep to                      d. extend
- (7) a. ignored                      b. met                      c. broken                      d. missed
- (8) a. by the way                      b. by tomorrow  
c. on the time                      d. at a time
- (9) a. fair                      b. overwhelmed  
c. relaxed                      d. satisfied
- (10) a. Planning                      b. Talking                      c. Running                      d. Sleeping