

## 英 語 問 題

はじめに、これを読むこと。

1. この問題用紙は、16 ページある。ただし、ページ番号のない白紙はページ数に含まない。
2. 解答用紙に印刷されている受験番号が正しいかどうか、受験票と照合し、確認すること。
3. 解答用紙の所定の欄に氏名を記入すること。
4. 解答は、すべて解答用紙の所定の欄にマークするか、または所定の欄に記入すること。
5. 解答は、必ず鉛筆またはシャープペンシル(いずれもHB・黒)で記入すること。
6. 解答の綴りは正しくはっきりと記すこと。薄い文字や小さな文字、判読の著しく困難な文字など、あいまいな綴り方は不正解とする。
7. 訂正は、消しゴムできれいに消し、消しくずを残さないこと。
8. 解答用紙は、絶対に汚したり、折り曲げたりしないこと。また所定のところ以外には、絶対に記入しないこと。
9. 問題に指定された数より多くマークしないこと。
10. 解答用紙は、持ち帰らないこと。
11. この問題用紙は、必ず持ち帰ること。
12. 試験時間は、80 分である。
13. 解答をマークする場合の注意。

(マーク記入例)

良い例	悪い例
	

[ I ] 次の英文を読み、設問に答えなさい。

Sleep deprivation is a significant hidden factor in lowering the achievement of school pupils, according to researchers carrying out international education tests. It is a particular problem in more affluent countries, with sleep experts linking it to the use of mobile phones and computers in bedrooms late at night. Sleep deprivation is such a serious disruption that lessons have to be pitched at a lower level to accommodate sleep-starved learners, the study found.

The international comparison, carried out by Boston College, found the United States to have the highest number of sleep-deprived students, with 73% of 9- and 10-year-olds and 80% of 13- and 14-year-olds identified by their teachers as being ( あ ) affected. In literacy tests there were 76% of 9- and 10-year-olds lacking sleep. This was much higher than the international average of 47% of primary pupils needing more sleep and 57% among the secondary age group.

Other countries with the most sleep-deprived youngsters were New Zealand, Saudi Arabia, Australia, England, Ireland and France. High-performing Finland is also among the most lacking in sleep. Countries with the best records for getting enough sleep include Azerbaijan, Kazakhstan, Portugal, the Czech Republic, Japan and Malta. The analysis was part of the huge data-gathering process for global education rankings — the Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS).

These are among the biggest international benchmarks for education standards, based on tests taken by more than 900,000 pupils in primary and secondary schools in more than 50 countries and regional administrations. The rankings of results for math, science and reading were published at the end of last year, with Asian education systems dominating the top of the tables.

But the researchers also wanted to find out more about the influence of ( い ). There has been much analysis of the impact of family wealth and

poverty, but the Boston College researchers also wanted to measure factors such as sleep and nutrition. So the tests were accompanied ( う ) questionnaires for teachers, pupils and parents about sleep patterns. And this information was compared with pupils' test results, so that the performance in math, science and literacy could be compared with levels of sleep.

"I think we underestimate the impact of sleep. Our data show that across countries <sup>(4)</sup> internationally, ( え ) average, children who have more sleep achieve higher in math, science and reading," says Chad Minnich, of the TIMSS and PIRLS International Study Center. "It's the same link for children who are lacking basic nutrition. If you are unable to concentrate, to attend mentally, you are unable to do your best, because your mind and body are in need of something more basic."

"Sleep is a fundamental need for all children," says Mr. Minnich. "If teachers report such large proportions of children suffering from lack of sleep, it's having a significant impact. But worse than that, teachers are having to modify their instruction based on those children who are suffering from a lack of sleep. The children who are suffering from a lack of sleep are driving down instruction." That means that even the children who are getting enough sleep are still suffering from the problems caused by the sleep-deprived students.

The researchers uncovered ( お ) trends that went against expectations. Asian countries are the highest-performing in math tests — and Mr. Minnich says this has often been ( A ) with long hours and cramming in after-school classes. "One would assume that they would be extremely tired," he said. "And yet when we look at the sleep factor for them, they don't necessarily seem to be suffering from as much sleep deprivation as the other countries."

Getting a good night's sleep isn't going to transform an underperforming country into an education superpower. For instance, the least sleepy pupils <sup>(5)</sup> seem to be in Azerbaijan, but they are still considerably ( か ) the most sleep-deprived pupils in Finland. But researchers say that it does show how

differently individual pupils might be ( B ) on the ability spectrum, with lack of sleep representing the difference between being high-performing and average.

There are also big changes as pupils get older. Younger pupils in South Korea have among the lowest levels of sleep deprivation in the world, but in secondary school they have some of the worst problems. There are differences within countries too. At the level of U.S. states, among secondary pupils Colorado has a much worse problem with lack of sleep than Massachusetts.

What the study does not show is why young people are missing out on sleep — or why more technologically advanced countries seem to ( C ) the biggest difficulties. But sleep experts point to a particular problem due to technology in children’s bedrooms — ( き ) the use of screens on smartphones or laptops late at night.

It isn’t only that young people are kept awake by messaging their friends or using the Internet. The light from the screen, held close to the face, prevents people from naturally ( D ) asleep.

According to Karrie Fitzpatrick, sleep researcher at Northwestern University in Illinois, a computer screen that is eight inches away from your face is going to expose you ( < ) a lot more light than a television on the opposite side of the room. “It’s going to tell your brain to stay awake. That light can reset the whole circadian rhythm<sup>1</sup> system and say, ‘( け ), it’s not time to go to bed.’”

Lack of sleep is also a serious physical barrier to learning. “Sleepiness is a problem at all stages that are relevant to learning, memory and academic performance,” says Derk-Jan Dijk,<sup>(6)</sup> director of the Sleep Research Centre at the University of Surrey.

Research into sleep disorders and brain function has shown the importance of sleep in improving people’s memory and their ability to organize information. Without sleep, the brain struggles to absorb and retain ideas. “There is a growing interest in the associations between ( こ ),” says Professor Dijk.

Dr. Fitzpatrick says lack of sleep is going to leave pupils more emotionally







問 3 下線部(1)~(6)について、最も適切なものをそれぞれ1つ選び、その番号をマークしなさい。

(1) この affluent と最も意味が近いのは

- |              |              |
|--------------|--------------|
| 1 developing | 2 diligent   |
| 3 populous   | 4 prosperous |

(2) この benchmarks と最も意味が近いのは

- |                             |                       |
|-----------------------------|-----------------------|
| 1 established organizations | 2 guiding principles  |
| 3 hidden milestones         | 4 impressive outcomes |

(3) この dominating the top of the tables とは

- 1 directing the study methods of the most serious students
- 2 influencing the brightest researchers with informative data
- 3 overlooking the living spaces of the least sleep-deprived children
- 4 taking the highest positions in the research findings

(4) この we underestimate the impact of sleep とは

- 1 we always question how many hours of sleep we must get each night
- 2 we cannot completely comprehend what sleep means when we are awake
- 3 we do not fully appreciate how important sleep is for task performance
- 4 we rarely guess at the level to which sleep matters to children who lack nutrition

(5) この an education superpower とは

- 1 並外れた教育力
- 2 教育大国
- 3 大規模な教育産業
- 4 高等教育

(6) この relevant と最も意味が近いのは

- 1 pervasive      2 positive      3 reconstructed      4 related

問 4 以下の各群について、本文の内容と合致するものを1つ選び、その番号をマークしなさい。

A群

- 1 Children who receive enough nutrition can make up for their lack of sleep.
- 2 Sleep-deprived students end up influencing everyone else in the classroom.
- 3 Sleep-starved learners are able to concentrate if they are from Asian countries.
- 4 Teacher lesson plans are so carefully constructed that they require few changes.

B群

- 1 Adequate sleep is not the chief factor of pupils' high performance in Finland.
- 2 No variation in student sleep levels was found within the countries examined.
- 3 Research could not determine which country's children slept the least.
- 4 Students cannot remember how many hours of sleep they get each night.



C群

- 1 Economic factors do not have any influence upon academic performance.
- 2 Primary school students in South Korea do not have the worst problems with lack of sleep.
- 3 The number of students who took the TIMSS and PIRLS tests must stay secret.
- 4 The use of mobile phones and computers during class sometimes impairs normal brain function.

〔Ⅱ〕 次の英文を読み、設問に答えなさい。

Letter boxes in Britain have become an iconic symbol of the nation. They are recognized the world over and are frequently featured in tourist brochures, postcards and greeting cards. They are ( A ) after throughout the world to decorate gardens, offices and even ships. Britain was not, however, the first country to introduce letter boxes. In 1840 Uniform Penny Post<sup>1</sup> was launched, marking a revolution in the way the postal system could be used. Rowland<sup>(1)</sup> Hill's<sup>2</sup> postal reforms opened up the postal system to almost every person in Britain. Use of the system multiplied rapidly and as a result the earlier methods of collecting, sorting and delivering letters had to change. Prior ( あ ) the introduction of letter boxes, there were principally two ways of posting a letter. Senders would either have to take the letter ( い ) person to a receiving house (effectively an early post office) or await the bellman. The bellman wore a uniform and walked the streets collecting letters from the public, ringing a bell to ( う ) attention.

Anthony Trollope, now more famed as a novelist, was ( B ) as a surveyor's clerk for the post office in the 1850s. His duties involved traveling to Europe, ( え ) he saw roadside letter boxes in France and Belgium. He proposed the introduction of such boxes in Britain. To that end, in 1852 three cast-iron<sup>3</sup> pillar boxes were installed as a trial on the island of Jersey. Later that year another four were introduced on Guernsey, and two of those original boxes have survived until today. The trials were considered a success and boxes began appearing on the British mainland from 1853. During this initial period, design, manufacture and erection of boxes was the responsibility of local surveyors. This meant that no standard pattern was issued and it ( C ) in a variety of styles. In basic form, all boxes were vertical pillars with a small slit to receive letters. There the similarities ended. By 1857 horizontal, ( お ) than<sup>(3)</sup> vertical, openings were taken as the standard. Flaps were installed over the

openings to stop rain from entering and the openings were placed below caps that stuck out slightly.

The color of British letter boxes is as much a part of their iconic nature as any other feature. Today everyone knows that letter boxes are bright red, but the earliest boxes were painted green so as not to appear too unnatural in the landscape. This was so effective that <sup>(4)</sup>people complained about the difficulty of finding the boxes. The post office investigated alternative colors and initially <sup>(5)</sup>settled on chocolate brown. However, brown required an extra coat of varnish, <sup>(6)</sup>making it more expensive than the other suggestion of bright red. The latter color was introduced in 1874 and it took ten years to complete the program of repainting. ( か ) has remained the standard color with only a few exceptions. In the 1930s special blue boxes were introduced for airmail letters and the post boxes in the home towns of the victorious British athletes in the London 2012 Olympic Games were painted gold.

The reign of Queen Elizabeth has seen the greatest variety of boxes since the early Victorian experiments. In 1968 square sheet-steel<sup>4</sup> boxes were tested but found to be ineffective. A cast-iron variant was launched in 1974 and some of these boxes are still in use. Though the square boxes were never as popular as the round ones, <sup>(7)</sup>they were reintroduced in 1995 expressly for use by companies with bulk postings. More recently reinforced plastic boxes have begun appearing in shopping centers and supermarkets.

There have also been experiments conducted in the size of post boxes. In 1897 smaller boxes were designed to ( D ) the demand for convenience in London squares. The boxes were made to be attached to lamp posts and were only large enough to accommodate small letters. These boxes soon began appearing in rural areas with a lower volume of mail, though <sup>(8)</sup>they subsequently disappeared from the London squares. Lamp boxes remain a regular feature of villages across Britain, often fitted to telegraph or lamp posts, or mounted on their own foundations. The size of these boxes and their openings has changed

slightly over the years in order to increase holding capacity and to accommodate larger letters of the modern era.

語注

- 1 Uniform Penny Post : イギリス国内であればどこへでも 1 ペニーで郵便物を送ることができる制度
- 2 Rowland Hill : イギリスの郵便制度の改革者(1795-1879)
- 3 cast-iron : 鋳鉄の
- 4 sheet-steel : 鋼鉄の

問 1 空欄( あ )～( か )に入る最も適切なものを 1 つずつ選び, その番号をマークしなさい。

- (あ) 1 by                      2 in                      3 of                      4 to
- (い) 1 about                      2 in                      3 on                      4 to
- (う) 1 attract                      2 avoid                      3 delay                      4 pay
- (え) 1 that    2 what  
      3 where    4 whether
- (お) 1 less                      2 more                      3 other                      4 rather
- (か) 1 Blue                      2 Brown                      3 Green                      4 Red

問 2 空欄( A )～( D )には、以下の動詞のいずれかが入る。それぞれに最も適切なものを選び、必要場合は文意が通るように語形を変えて、解答欄に1語で記入しなさい。

answer                  result                  seek                  work

問 3 下線部(1)～(8)について、最も適切なものをそれぞれ1つ選び、その番号をマークしなさい。

(1) この marking a revolution とは

- 1 bringing about differences of opinion
- 2 initiating a significant change
- 3 signaling future difficulties
- 4 starting a great battle

(2) この The trials が示す具体的な内容として最も適当なものは

- 1 the construction of the European survey system
- 2 the establishment of post offices in France and Belgium
- 3 the placing of letter boxes on Jersey and Guernsey
- 4 the promotion of local surveyors on the British mainland

(3) この There the similarities ended. とは

- 1 In all ways the boxes could be considered completely identical.
- 2 Nothing else about the boxes illustrates how they differed.
- 3 The number of differences equaled the number of similarities.
- 4 There were no other ways in which the boxes resembled each other.



(4) この a part of their iconic nature が示す内容に最も近いのは

- 1 something that gives people a sense of peacefulness
- 2 something that makes them widely recognizable
- 3 something that is misunderstood but attractive
- 4 something that suggests wealth and power

(5) The reason why people complained about the difficulty of finding the boxes was:

- 1 they blended into their surroundings too well.
- 2 they were considered distasteful.
- 3 they were harmful to the environment.
- 4 they were not painted the most popular color.

(6) この settled on とは

- 1 bound under contract
- 2 decided to use
- 3 selected by mistake
- 4 tested for certain

(7) この they とは

- 1 cast-iron boxes
- 2 round boxes
- 3 sheet-steel boxes
- 4 square boxes

(8) この they とは

- 1 lamp posts
- 2 rural areas
- 3 smaller boxes
- 4 small letters

問 4 以下の各群について、本文の内容と合致するものを1つ選び、その番号をマークしなさい。

A群

- 1 All British people who adore letter boxes use them to furnish their properties.
- 2 In the modern era, people visiting London tend to write fewer and fewer letters.
- 3 One early alteration in letter boxes protected mail from unwanted moisture.
- 4 The image of the letter box is considered both heroic and sacred in Britain today.

B群

- 1 Before the postal system reformation, it was forbidden to give letters to bellmen.
- 2 Letter boxes were not in use in Britain when the first ones appeared in Belgium.
- 3 No standard color for letter boxes existed until blue became the dominant color.
- 4 The first letter box in Britain was transferred from France to London in 1840.

C群

- 1 Post offices became unnecessary thanks to the introduction of letter boxes.
- 2 The letter boxes in London were made of gold after the 2012 Olympic Games.
- 3 The oldest British letter boxes can be traced back to 1852.
- 4 The experiments conducted with letter boxes included those related to size and weight.

〔Ⅲ〕 次の(1)～(5)の各文について、下線部①～④の中から不適切な箇所をそれぞれ1つずつ選び、その番号をマークしなさい。

- (1) UNESCO has removed<sup>①</sup> the Galapagos Islands from its<sup>②</sup> list of endangered World Heritage sites. The volcanic islands — famous for<sup>③</sup> unique wildlife — were putting<sup>④</sup> on the “red list” in 2007 due to concerns over increased tourism and pollution.
- (2) Cheetahs will be reintroduced<sup>①</sup> to India for the first time in nearly a century. Hunters most<sup>②</sup> pursued the species to<sup>③</sup> extinction during India’s time under British rule<sup>④</sup>, and they have not lived in the country for many decades.
- (3) Thirty bottles of champagne that may have been sent to Russia by Louis XVI just before the French Revolution have been found close<sup>①</sup> to a shipwreck. Preserving<sup>②</sup> in perfect conditions of cold and darkness, the champagne is said<sup>③</sup> to taste “fabulous” and to have lost<sup>④</sup> no sparkle.
- (4) A Bosnian man whose house has been hit<sup>①</sup> six times by space rocks believes he is being targeted by aliens. The rocks have fallen repeatedly<sup>②</sup> on his house over the past few years, forcing him to have his roof strengthened<sup>③</sup>. “The chance of being hit by a space rock is so small that gets<sup>④</sup> hit six times has to be deliberate,” he said.
- (5) Everybody thought that by the end of the twentieth century we would be taken<sup>①</sup> holidays on the moon, but somehow this has never happened. True, a few astronauts have walked<sup>②</sup> on the moon, and there are space vehicles which fly<sup>③</sup> up and down regularly; there’s now even an international space station, but it is nothing<sup>④</sup> like we imagined.