

## 平成30年度入学試験問題

英

語

コミュニケーション  
英語 I ・ II ・ III  
英語表現 I ・ II

## (注意事項)

1. 問題冊子は指示があるまで開かないこと。
2. 問題冊子は15ページ、解答紙は5枚あります。「始め」の合図があったらそれぞれを確認すること。
3. 解答紙それぞれの2箇所受験番号を記入すること。
4. 解答はすべて解答紙の所定の欄に記入すること。
5. この教科は200点満点です。なお、文学部については150点満点に、経済学部  
経済工学科については300点満点に、農学部については250点満点に、共創学部  
については400点満点に換算します。

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[ 1 ] 次の英文を読み、設問に答えなさい。(50点)

1 Mars is an especially good mission target due to its closeness to us. It is relatively similar to Earth in a number of crucial ways, making it a better destination for manned missions and potential colonization than any other planet in the solar system. We have loved Mars for centuries. The planet has firmly embedded itself in our culture, so much so that “Martian” is somewhat synonymous with “alien”, though the aliens you imagine may vary.

2 This cultural interest is mirrored by scientific interest. Our first mission to Mars launched in 1960, and we have attempted more missions to the planet than to anywhere else in the solar system except for the Moon. Given this history, you would be forgiven for thinking that we must know almost all there is to know about Mars by now, but that is not the case. For one, we are still unsure of how Mars formed. <sup>(1)</sup> The planet is surprisingly small and does not fit into our theories of how the solar system came together. We are not sure how its two small <sup>(2)</sup> moons formed, either. These lumpy, bumpy rocks have puzzling properties. They may have formed in orbit around Mars, they may be captured asteroids\*, or they may be the result of a giant impact that knocked material from Mars.

3 We also lack a complete understanding of Mars’s history. We see signs of past water all over its surface and in its chemistry, and so think it was once much warmer than it currently is in order to support liquid water. However, we are not sure how this waterworld changed into the dry lump we see today. To support widespread water and warmth, Mars’s atmosphere must have been very thick during the planet’s youth (probably facilitated by a far stronger magnetic field). Where did it all go?



問 1. 第 2 段落の下線部 that が表す具体的意味内容を日本語で述べなさい。  
(1)

問 2. 第 2 段落において、下線部 its two small moons がどのように形成されたのかに関して述べられている三つの仮説を、日本語で具体的に答えなさい。  
(2)  
それぞれを①から③の解答欄に記入すること。

問 3. 第 3 段落では、火星の水に関してどのような事実と推論が示されているか、80 字以内の日本語で述べなさい。ただし、句読点も字数に含みます。

問 4. 第 4 段落の下線部 died out に最も近い意味を表すものを、以下のうちから一つ選び、解答欄に書きなさい。  
(3)  
issued, killed off, murdered, perished

問 5. 第 6 段落の下線部(4)の空所に入る最も適切なものを以下 (A, B, C, D) の中から一つ選び、記号で答えなさい。

A. it is not true that the Earth is full of liquid water and a wide range of living creatures

B. Jupiter's moons are too far even for future generations to conduct any extensive research in them

C. Mars is our neighbor, in addition to being part of the only planetary system in the universe known to harbor life

D. Titan is Saturn's largest moon, and it is the only moon with clouds and a dense, planet-like atmosphere



[ 2 ] Read the following passage and answer the questions below. (48 点)

1 Sleep experts often liken sleep-deprived people to drunk drivers: They don't get behind the wheel thinking they're probably going to kill someone. But as with drunkenness, one of the first things we lose in sleep deprivation is self-awareness.

2 Sleep disturbance is among the most common sources of health problems in many countries. Insufficient sleep causes many chronic and serious medical conditions that have an enormous impact on quality of life, not to mention the economy. While no one knows why we sleep, it is a universal biological necessity; no animal with a brain can survive without it.

3 But how much sleep do we really need, how can we sleep better, and are there ways to cheat the system? Research shows that there is a perpetual divide between what's known to scientists and what most people do. That's why the American Academy of Sleep Medicine brought together a body of scientists from around the world to answer these questions through a review of known research. They looked at the effects of sleep on heart disease, cancer, obesity and human performance.

4 One 2014 study of more than 3,000 people in Finland found that the amount of sleep that correlated with the fewest sick days was 7.63 hours a night for women and 7.76 hours for men. So either that is the amount of sleep that keeps people well, or that's the amount that makes them least likely to lie about being sick when they want to skip work. Statistics are tough to interpret.

5 In another study researchers kept people just slightly sleep deprived — allowing them only six hours to sleep each night — and watched the subjects' performance on IQ tests drop. The crucial finding

was that throughout their time in the study, the sixers thought they were functioning perfectly well, yet clearly they were not.

6 This finding has been replicated\* many times, even as many work fields continue to encourage and celebrate sleep deprivation. In most professions it seems that companies are happy to have employees that work and never sleep. But it is hard to think of another type of self-injury that might be similarly applauded.

7 <sup>(ii)</sup> The consensus: When we get fewer than seven hours rest, we are <sup>(2)</sup>weakened (to degrees that vary from person to person). When sleep persistently falls below six hours per day, we are at an increased risk of health problems.

8 Many people seem engaged in a daily arms race <sup>(iii)</sup> between wakefulness and unconsciousness, using various products to mask and manage poor sleep habits, and ultimately just needing more products. Caffeine and other stimulants followed by a mix of relaxing sedatives\*\*. Or alcohol, which only further messes with our natural body rhythms. Effective sleep habits, like many things, appear to come back to self-awareness.

9 So how does one break unhealthy sleep habits? Here are a few simple ideas that many experts recommend. Try to keep a somewhat constant bedtime and wake-up time, even on weekends. Keep caffeine use moderate, even if you don't feel like a nighttime coffee affects you. The same goes for cocktails. Use screens wisely, too. Remember that even on night mode, a phone or computer is shooting light into your brain. Read something on paper instead.

Notes:

replicated\*: repeated

sedatives\*\*: drugs taken for their calming or sleep-inducing effect



- Q 1. Choose the most appropriate meaning of the underlined words or phrase (i)–(iii). Write the correct word.
- (i) cherish, compare, dislike, enjoy
  - (ii) criticized, deafening, normal, praised
  - (iii) commute, disappointment, steadiness, struggle
- Q 2. Translate the underlined sentence (1) in Paragraph 2 into Japanese.
- Q 3. Paragraph 4 states that statistics are tough to interpret. According to the passage, write in Japanese the two possible interpretations of the 2014 Finnish sleep study.
- Q 4. Explain in Japanese the content of the underlined part The consensus in Paragraph 7. <sup>(2)</sup>
- Q 5. Choose one statement that conforms to the ideas presented in the text and write the letter (A, B, C, D) of your choice.
- A. Employees should quit if they feel that they are overworked.
  - B. Many professions expect their workers to endure sleep deprivation.
  - C. People are usually willing to accept scientists' advice on sleep disorder.
  - D. Insufficient sleep deteriorates health conditions but has no impact on the economy.



[ 3 ] Read the following passage and answer the questions below. (45 点)

- 1 It is hard to ( A ) when we take the train in Tokyo: white-gloved employees in crisp uniforms pointing smartly down the platform and calling out — seemingly to no one — as trains glide in and out of the station. Onboard is much the same, with drivers and conductors performing almost ritual-like movements as they tend to an array of dials, buttons and screens.
- 2 Japan's rail system has a well-deserved reputation for being among the very best in the world. An extensive network of railway lines moving an estimated 12 billion passengers each year with an on-time performance measured in the seconds makes Japanese rail a precise, highly reliable transportation marvel.
- 3 Train conductors, drivers and station staff play an important role in the safe and efficient operation of the lines, a key aspect of which is the variety of physical gestures and vocal calls that they perform while undertaking their duties. While these might strike foreigners as silly, the movements and shouts are a Japanese-innovated industrial safety method known as pointing-and-calling. According to one 1996 study, this method reduces workplace errors by up to 85 percent. Pointing-and-calling works on the principle of associating one's tasks with physical movements and vocalizations to prevent errors by raising the consciousness levels of workers. Rather than relying on a worker's eyes or habit alone, each step in a given task is reinforced ( B ) and audibly to ensure the step is both complete and accurate.
- 4 In the rail context, when train drivers wish to perform a required speed check, they do not simply glance at a display. Rather, the speedometer will be physically pointed at, with a call of "speed check, 80" — confirming the action taking place, and audibly confirming the

correct speed. For station staff who ensure the platform-side tracks are free of debris or fallen passengers, a visual scan alone is not sufficient. Instead, the train station attendant will point down the track and sweep their arm along the length of the platform — eyes following the hand — before declaring all clear. The process repeats as the train departs, ensuring no bags — or passengers — are caught hanging from the train's closed doors.

5 As stated above, pointing-and-calling is known to reduce workplace errors. While some workers point-and-call more enthusiastically than others, even those who are more indifferent benefit from the increased awareness that comes from physically reinforcing each task.

6 For such a simple but effective method of improving workers' error  
<sup>(1)</sup>rate, the system continues to find itself largely confined to Japan.  
Indeed, it is one of the many eccentricities of the Japanese workplace that do not impress Western workers. In the case of pointing-and-calling, Japanese commentators have theorized that Western employees feel “silly” performing the requisite gestures and calls. Japanese workers are not immune to feeling self-conscious when it comes to pointing-and-calling, although with training it soon becomes an accepted part of the job. A spokesperson for Tokyo Metro noted in a statement that new employees “recognize pointing-and-calling as necessary for safe rail operations, and therefore do not feel ( C ).”

Q 1. Choose the most appropriate word for the blanks (A), (B) and (C).

Write the correct word.

(A) know, miss, predict, prove

(B) apparent, manually, randomly, scarce

(C) abolishment, contentment, embarrassment, settlement

Q 2. What is the percentage for the blank below that best completes the following statement? Answer based on Paragraph 3.

When the pointing-and-calling method is adopted, errors could fall down to (        ) at lowest.

Q 3. What do train drivers do at the speed check? Describe this process in Japanese based on Paragraph 4.

Q 4. When the train comes in, what do station attendants do on the platform to make sure that the track has no obstacles? Explain the complete procedure in Japanese based on Paragraph 4.

Q 5. Translate the underlined part (1) in Paragraph 6 into Japanese.



[ 4 ] Read the passage and follow the instructions below. (30 点)

According to Japanese Health Ministry research, by 2025 around 30% of Japan's population will be aged over 65. This percentage may continue to rise to as much as 40% by 2050, along with a likely increase in the number of elderly people who need long-term personal and medical care. However, as birthrates fall and families get smaller, families will be less able to care for their oldest members.

**Instructions:** Write a well-developed paragraph in English consisting of around 100 words, answering the following question:

What can Japanese society do to support older people who will need care in the future?

Give clear examples and details to support your answer.

〔5〕 次の文章の下線部(1), (2)を英語で表現しなさい。(27点)

最近、旅をする若い人が少なくなったとよく聞く。実際、少し前まではどんなところでも若い日本人旅行者とドイツ人旅行者がいて、他の国からの旅行者の冗談のタネでもあったものだが、日本人のほうは、今では滅多に見かけない。<sup>(1)</sup>かつては数々の紀行文や旅小説が、若い人の旅心に火をつけていた。いつかまた、そんなふうになることを私は願う。異国を旅することは、自分——自分の知っている場所、立っている位置——<sup>(2)</sup>が世界のまんなかでもなく、常識の基準でもないと知ることだ。こんなにも違うと絶望し、こんなにも同じだと安堵することだ。そういうことのあるとなしでは、その後のその人のありようが、ずいぶん違うと思うのだ。