

札幌医科大学 一般

見 本

英語問題紙

平成 26 年 2 月 25 日

自 9 : 00

至 10 : 20

答案作成上の注意

1. 英語の問題紙は 1 から 12 までの 12 ページである。
2. 解答用紙は ① から ② までの 2 枚である。
3. 解答はすべて解答用紙の指定された箇所に書くこと。
4. 問題紙は持ち帰ること。

1 以下の英文を読んで問いに答えよ。

Despite advances in genetic engineering, it seems that human society will never improve. Fortunately, something has been done to remove a few of its stresses. The Pause Button has been invented.

¹⁾ Cotard, the great French psychiatrist, previously identified a syndrome whereby patients believe themselves to be dead. The illusion persists, despite such evidence to the contrary (A) heartbeat, lungs functioning perfectly, and body temperature sustained. The self-evident impossibility of the notion causes it to break down after a while.

Here was the clue that led to the invention of the Pause Button. Despite its popular nickname, the micro-function was a molecular machine.

A small molecule is sited on a large molecule where, like an enzyme*, it bonds. Other molecules are added, until a complex structure is formed. Thus a nanomachine is created which is controlled by molecular tapes responsive to adrenaline* rises in the brain of as little as 0.0001 per cent.

When correctly positioned in the right temporal lobe* of the brain, the Pause Button, more properly known as the Delay Functional Reflex, has the following function. In a crisis situation, the person with a DFR is given pause. Although the delay is momentary, it allows the person to think about what he intends to do. Our brains have been so constructed that emotion overrides intellect in crisis situations. Anger blots out thought. The DFR prevents this ^{a)} phylogenetic* trait.

Much violence is prevented. Beating the dog, the child, men beating women — such things are forestalled. Before, the percentages of male violence ^{b)} against their female partners were alarming: in the U.K., twenty-five per cent, in the U.S.A., twenty-eight per cent. Many such elemental* attacks were launched when the woman became pregnant. Since the widespread introduction of DFRs, these figures have dropped to eleven per cent and twelve

per cent respectively.

At first, the creators were able to sell their device only (B) such institutions as prisons, where the insertion of a DFR earned a prisoner a five per cent reduction of sentence.

c) An enlightened government saw wider opportunities. Motorists were tempted by a reduction in cost of their vehicle license if they underwent the operation. Road rage became a thing of the past. Accidents rapidly decreased.

The general public became interested. It was pleasant to remain calm. The DFR also prevented hasty words spoken (C) anger. There was greater harmony between partners than previously. Euphoria* became popular.

Today, no longer are we asking, 'Why did I do that?' or, 'What was I thinking about?' We now take the opportunity to know.

Perhaps the most dramatic change came in political habits. Politicians in democracies were elected, in many cases, to solve problems almost beyond the province of politics, such as how to stop wastage of valuable resources, how to assist and educate the disempowered, how to prevent racial tensions. Voters said they supported these ambitions. あ, the promise of tax cuts persuaded them to think differently. If a slight reduction in taxes was offered against increased funding of education, it was not infrequently education which went to the wall.

d) So politicians uttered hypocritical promises. They swore to effect changes that could not be carried through within the five year electoral term. Both sides of the bargain were lulled* by false promises.

But then came the Pause Button effect!

Now, everyone is given time to consider. So we are becoming more honest, more realistic. We now have time to consider the value of honesty, to weigh the truth behind promises — we who were so accustomed (D) a

diet of lies.

In the year that the creators received the Nobel Peace Prize, we voted in the United Reality Party to govern the country.

The great challenge now is to link the DFR into the genetic chain, so that its effects become inheritable.

Of course this will change us. Our broken-down societies will change. Later, fully evolved human beings will look back on today much as we look
2) back on the people of the Stone Age.

Brian Aldiss. *Supertoys Last All Summer Long and Other Stories of Future Time*. Orbit. 2001. 一部改変.

*NOTES

enzyme: a chemical substance found in living creatures that produces changes in other substances without being changed itself

adrenaline: a chemical produced by the body when one is afraid, angry, or excited, which makes the heart beat faster and can lead to temporary increases in speed and strength

temporal lobe: a part of the brain that is responsible for hearing, memory, and speech

phylogenetic: of the evolutionary development of an organism or groups of organisms

elemental: powerful and/or simple

euphoria: a feeling of great happiness that usually lasts for a short time only

lull: soothe

問 1. 下線部 1) について、次の a, b の問いに日本語で答えよ。

a. Pause Button とは何か、わかりやすく説明せよ。

b. Pause Button の効果について、本文に即して主なものを 3 点あげよ。

問 2. 空欄(A)～(D)に文脈から考えて最もふさわしい単語を一語入れよ。

問 3. 下線部 a)～e)の意味として最もふさわしいものを下記のア～エから1つ選び、記号で記せ。

a) blots out

ア. assists

イ. erases

ウ. imitates

エ. protects

b) forestalled

ア. allowed

イ. avoided

ウ. continued

エ. promoted

c) reduction of sentence

ア. extended time

イ. longer stay

ウ. shorter term

エ. smaller contract

d) went to the wall

ア. was accepted

イ. was achieved

ウ. was dropped

エ. was helped

e) hypocritical

ア. actual

イ. honest

ウ. insincere

エ. small

問 4. 空欄

あ

 に文脈から考えて最もふさわしい単語を下記のア～エから
1つ選び、記号で記せ。

ア. Furthermore

イ. However

ウ. In other words

エ. Therefore

問 5. 下線部 2) について、次の a, b の問いに日本語で答えよ。

a. fully evolved human beings とは何か、本文の内容に即して具体的に説明せよ。

b. today と Stone Age が対照されていることの意味は何か、わかりやすく説明せよ。

2 以下の英文を読んで間に答えよ。

At 185 centimeters and 95 kilograms, Yuichi Takano knows that he stands out in a crowd in Japan. "Starting from my first year in elementary school, I was always the biggest and strongest kid in my class," he says. He used that size to his advantage. A star soccer player in elementary school, his team was consistently among the best in Hokkaido, with Takano scoring the majority of goals. In high school, his interest turned to baseball, and in his third year he led his team to the semi-finals of Japan's famed national high school tournament.

A

Today, over twenty years later, Takano is still a very good athlete. He spends several hours a week in the weight room, and is an enthusiastic runner. He participates in several races every year and achieved a personal best last month in his favorite event, the 10-kilometer race, finishing in just under 40 minutes.

B

In addition to constant exercise, Takano follows a mostly healthy diet, although he admits that in the last two years he has not always been as (1) about what he eats. "I really love bacon," he says. "I have it for breakfast almost every morning." Perhaps as a result, in those two years he has gained about five kilograms. Additionally, his body fat percentage has risen from 14.5 to 17.0. That, however, is still considered healthy, especially for a man who has just celebrated his 45th birthday. (What is considered normal for men his age ranges from approximately 21 to 24 percent.)

C

According to Takano's Body Mass Index (BMI), which is the most common standard used to determine a person's ideal weight, he is too heavy. An individual's BMI value is calculated by an equation* that takes into account

the person's weight and height measurements. This equation is simple: the value is calculated by dividing a person's weight in kilograms by his or her height in meters squared. The World Health Organization classifies these BMI values into four main categories. Those with a BMI under 18.5 are considered underweight. A figure ranging from 18.5 to 24.99 is considered normal, 25 to 29.99 supposedly indicates that one is overweight and anyone with a BMI of 30 or greater is considered obese*. With a BMI value of 27.8, Takano's weight therefore falls into a range that is considered unhealthy. In Japan, the news is even (2) for him. Studies indicate that Japanese men may have a greater risk of developing health problems related to weight at lower BMI values than Caucasian* men. Perhaps for this reason, in Japan a BMI of 25 or greater is considered not just mildly overweight, but obese.

D

Critics have long protested that BMI is a very poor method of determining an individual's ideal weight and unfairly labels countless numbers of seemingly healthy people such as Takano fat. The major problem, they claim, is that it does not make any distinctions between differences in body frames or body composition (percentages of a body's fat, bone and muscle). It is determined solely by an individual's height and weight. They see this as particularly disadvantageous to muscular people such as Takano, and thousands of others like him. One of the more famous examples of this is Arnold Schwarzenegger, who before becoming a movie star (and governor of California) was a world champion bodybuilder. At the height of his success, Schwarzenegger had a body fat percentage that was often under 8.5. However, his BMI was well over 30, which would classify him as obese.

E

Many also believe that associating obesity with BMI numbers can be dangerous, in that perfectly healthy individuals who happen to be (3) the range of what is considered normal may feel pressure to make major changes

to their lifestyles in order to obtain what is considered an acceptable BMI. It is not uncommon for people to participate in severe low-calorie diets or exercise to the extent that injuries occur simply to get their BMI value under 25.

F

Why, then, is BMI considered the standard for determining one's appropriate weight? One reason, of course, is its simplicity; anyone can calculate his or her BMI figure in seconds. Moreover, for those not skilled at calculations, there are numerous online sites that will do the math for them. All they have to do is supply their height and weight. Additionally, the BMI formula is more accurate in calculating an individual's body "fatness" level than weight alone; despite what some critics claim, the range within each classification does allow for some differences in body types. For example, a person whose height is 175 centimeters can weigh anywhere between 57 and 76 kilograms and be classified in the normal weight range. Finally, although measuring body fat percentage is arguably a far more accurate way of determining obesity, the process of doing so is considerably more difficult than measuring one's BMI. (Although there are many bathroom weight scales that claim to be able to calculate a person's body fat percentage in addition to body weight, they are often very inaccurate.) Checking for body fat percentage takes more time than calculating one's BMI and often requires the assistance of a trained professional. Also, those being measured may be asked to remove some of their clothing, which may cause some to feel uncomfortable. For many, the BMI method is preferable due to time and privacy issues.

G

In some ways, the debate over BMI may not be as relevant in Japan as it is in other countries, at least for those at age 40 or above. Rather than BMI, the official guideline for determining whether these people are obese is to measure their waistlines. The maximum "healthy" waistline for men is 85

centimeters; for women, the figure is closer to 90 centimeters. However, here too Takano is out of luck. With a waistline of 89.3 centimeters (“Only two centimeters larger than in high school,” he says), he remains an “obese” man in Japan.

*NOTES

equation: mathematical statement showing that two amounts or values are the same. For example, $6 \times 4 = 12 \times 2$.

obese: very overweight, in a way that may be dangerous for one’s health.

Caucasian: of a member of a race of people with white or pale skin.

問 1. (1) ~ (3) の空欄に内容的にふさわしい英語をそれぞれ 1 語入れよ。

問 2. 文章全体の流れを考え、以下の段落を文中の A ~ G のどの位置に入れるのが最も適当か、記号で答えよ。

With obesity rates worldwide continuously rising to ever higher levels, Takano is seemingly one who should be admired as a model of good health, a person who takes good physical care of himself even as he ages. As such, it may come as a huge surprise to learn that by one standard for measuring fitness, he is considered overweight.

問 3. 以下の質問に英語で(60~75 語)答えよ。

To reach a BMI that is considered within the “normal” range, Takano would need to lose almost 10 kilograms. Do you believe he should try to do this?

問 4. 以下の文章の“Frank”と“Yukihiro”の下線部にふさわしい英語を入れて完成させよ。それぞれ約20～30語とすること。

John: Recently, I've seen several Japanese TV programs about people who are trying to lose a lot of weight really quickly. Just last night there was one that showed a person who lost over 30 kilograms in two months.

Frank: I don't really like those kinds of shows. In fact, I think they're dangerous, because _____

Yukihiro: I don't agree. I think these shows are important, especially right now, because _____

3 以下の下線部を英訳せよ。

A : 日本の電車では眠っている乗客が随分目につきますね。日本人はなぜ電車の中で眠るのですか。

B : 忙しい仕事で疲れているからだとお思いでしょう。それもある程度は事実でしょうが、電車は居眠りをするのにとっても良いところなのです。安全ですし、電話もかかってこないし、上司のうるさい目もありません。車がレールの上を走る規則的な音を聞いているとすぐうとうととしてきます。むしろなぜ眠らないのかとおききしたい。あなた方も日本にいるときぐらい電車で眠ってはいかがですか。