

慶大英語予想問題演習＜医学部編＞
(2)

(Time Allowed: 90 minutes)

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[I] 次の和文の内容を英語で書き表しなさい。

伝統的な日本食には穀物や魚が豊富に含まれており、それらは共に認知症 (dementia) のリスクを下げる働きがある。1980 年代以降、日本人はだんだん洋食を食べるようになった。それに応じて日本におけるアルツハイマー病の割合 (the Alzheimer's rate) は 1985 年のわずか 1 パーセントから 2008 年の 7 パーセントにまで急増した。

[II] 次の英文を読んで設問に答えなさい。

Medical historians generally (A) to Hippocrates as the founder of medicine as a rational science. (1)It was Hippocrates who finally freed medicine from the shackles of magic, superstition, and the supernatural.

Hippocrates collected data and conducted experiments to show that disease was a natural process; that the signs and symptoms of a disease were caused by the natural reactions of the body (B) the disease process; and that the chief role of the physician was to aid the natural (C) of the body to overcome the metabolic imbalance and restore health and harmony to the organism.

When Hippocrates began to (D) medicine, the established school of medicine was the Cnidian school. But this school's approach to medicine had several (2)serious flaws, which were already becoming (E) and starting to cause a general dissatisfaction with the art of medicine.

The Cnidian school considered the body to be merely a collection of isolated parts, and saw diseases manifesting in a particular organ or body part as affecting that part only, which alone was treated. Their system of diagnosis was also faulty, relying exclusively on the subjective symptoms related by the patient, while totally ignoring the objective signs of the disease.

Hippocrates (F) disagreed with the Cnidian school, countering that the human body functioned as one unified organism, or *physis*, and must be treated, in health and disease, as one coherent, integrated whole. In diagnosis, not only the patient's subjective symptoms, but the objective signs of the disease must also be considered to arrive at an accurate (G) of what was going on.

As his main unifying theory for the holistic understanding of the human organism and how it functions in health and disease, Hippocrates used the concept of the Four Humors. Although the groundwork of humoral physiology and pathology had already been (H) by his predecessors, Hippocrates finally brought the theory of the Four Humors into its classical form.

Health is a harmonious balance of the Four Humors. Disease results from their disharmony and imbalance. The physician's job is to restore health by correcting the imbalance and restoring harmony to the humors.

設問

問1 本文中の (A) ~ (H) に入れるのにふさわしい語句を選択肢から選びなさい。

- | | | | | |
|-----|--------------|----------------|--------------|-----------------|
| (A) | 1 consider | 2 regard | 3 see | 4 look |
| (B) | 1 in | 2 of | 3 from | 4 to |
| (C) | 1 resistance | 2 selection | 3 approach | 4 forces |
| (D) | 1 practice | 2 ask for | 3 make up | 4 prescribe |
| (E) | 1 obsolete | 2 apparent | 3 lofty | 4 intriguing |
| (F) | 1 radically | 2 satisfactory | 3 thankfully | 4 radioactively |
| (G) | 1 assignment | 2 fabrication | 3 assessment | 4 myth |
| (H) | 1 lay | 2 found | 3 lain | 4 laid |

問2 下線部分 (1) を日本語に訳しなさい。

問3 下線部分 (2) の具体例を2点挙げよ。

[Ⅲ] 次の英文を読んで設問に答えなさい。

Those convenient plastic bottles that hold many of your favorite soft drinks could be poisoning your body with heavy metals, new research out of India has found. India's Drugs Technical Advisory Board (DTAB), a division of its government Health Ministry, recently (A) the presence of toxins like antimony, (ア)lead, chromium, cadmium, and Di (2-ethylhexyl) phthalate (DEHP) in the plastic of soft drink containers.

Many of these metals, especially lead and cadmium, are classified by the World Health Organization (WHO) (B) being a “major public health concern.” Lead and cadmium are both known to be carcinogenic*, and are linked to causing brain damage and other neurological impairment, not to (C) an array of birth defects and reproductive harm in those (D).

According to reports, the PET plastic bottles used to hold popular soft drinks like those manufactured by Coca-Cola and PepsiCo — as well as thousands of other beverage brands, including those marketed (E) being “healthy” — are (イ)loaded with chemicals that leach into the liquid inside.

(1)Whether due to heat, cold, or simple chemical reactions, these noxious substances end up in people's bodies where they can cause chronic harm.

It was big news back in 2009 that soft drinks containing high-fructose* corn syrup (HFCS) are often contaminated with mercury. As reported by *The Washington Post* and others, the process by which most HFCS is made involves exposing the syrupy sweetening substance to the toxic metal, which is especially harmful to developing children, many of whom chug down soda-pop on a routine basis.

Now, it's clear that soft drinks are a (ウ)threat in another major way due to other hidden heavy metals that are either coming out of the plastic bottles or somehow making their way into the fizzy beverages during manufacturing. In (F) case, soft drinks are proving to be a death sentence in the long-term, and possibly even in the short-term (G) on how much of it people consume.

(2)Lead is widely regarded as being one of the biggest environment threats to children, surpassing even that of tobacco smoke. Lead is known to damage IQ and harm the brain, and (H) higher levels it can lead to degradation of the central nervous system, resulting in convulsions*, seizures*, comas, and possible death.

The California Office of Environmental Health and Human Hazard

Administration (OEHHA) (エ) warns that lead can lead to birth defects and other reproductive harm, as can cadmium. Cadmium is perhaps even worse than lead in terms of its actual toxicity because it's known to damage vital organs like the kidneys, liver, as well as bones — even at very low levels and over long periods of time.

Like with lead, cadmium can lead to serious developmental problems like (I) birth weight and neurological harm, especially in males. (3) The reproductive potential of young boys who are exposed to cadmium is greatly diminished, the science shows, which is why its presence in popular soft drinks is that much more concerning.

A 2015 study published in the journal Toxicology Reports identified the presence of not only heavy metals but a host of other contaminants in soft drinks. One of these contaminants was alcohol, which is known to damage vital organs and cause impairment — (4) a major no-no for young children. This study concluded that soft drinks constitute “a major public health problem.”

Based on their high sugar content alone, the Harvard School of Public Health (HSPH) advises (J) soft drinks, warning that they're a major risk factor for type-2 diabetes, heart disease, and various other chronic health conditions.

設問

問 1 本文中の (A) ～ (J) に入れるのにふさわしい語句を選択肢から選びなさい。

- | | | | | |
|-----|-------------|----------------|-------------|-------------------|
| (A) | 1 uncovered | 2 unraveled | 3 unarmed | 4 underwent |
| (B) | 1 by | 2 on | 3 from | 4 as |
| (C) | 1 discuss | 2 mention | 3 tell | 4 talk |
| (D) | 1 exposing | 2 are exposing | 3 exposed | 4 are exposed |
| (E) | 1 for | 2 amongst | 3 in | 4 as |
| (F) | 1 either | 2 both | 3 no | 4 neither |
| (G) | 1 holding | 2 accounting | 3 relying | 4 depending |
| (H) | 1 to | 2 by | 3 at | 4 above |
| (I) | 1 decrease | 2 decreasing | 3 decreased | 4 on the decrease |
| (J) | 1 for | 2 to | 3 beyond | 4 against |

問2 下線部分(ア)～(エ)の発音について次の問いに答えなさい。下に示した(ア)～(エ)の下線部と同じ発音を、同じく下線部に含む語を、それぞれ選択肢1～3の中から1つ選び、その番号を解答欄に記入しなさい。

(ア) <u>lead</u>	1 <u>creature</u>	2 <u>intricate</u>	3 <u>metal</u>
(イ) <u>loaded</u>	1 <u>go</u>	2 <u>bought</u>	3 <u>abroad</u>
(ウ) <u>threat</u>	1 <u>breathe</u>	2 <u>cloth</u>	3 <u>smooth</u>
(エ) <u>warns</u>	1 <u>oath</u>	2 <u>hotel</u>	3 <u>wrong</u>

問3 下線部分(1)を日本語に訳しなさい。

問4 下線部分(2)を日本語に訳しなさい。(但し、leadは「鉛」と訳すこと。)

問5 下線部分(3)を日本語に訳しなさい。

問6 下線部分(4)を日本語に訳しなさい。

問7 According to the passage, are the following statements true or false? On the answer sheet, indicate those you consider to be true with an A, and those you think are false with a B. If you think it is impossible to tell from the passage whether a particular statement is true or false, indicate this with a C.

- (1) WHO points out that such metals as lead and cadmium do great harm to our health.
- (2) Major beverage manufacturers are not concerned that plastic containers may release toxins.
- (3) Mercury in HFCS-containing beverages is especially harmful for children in developing countries.
- (4) The more soft drinks you consume, the closer you get to death.
- (5) Soft drinks contain a certain level of alcohol, which increases the risk of putting on fat.

[IV] Read the passage below and answer the questions that follow it.

The establishment medical industry says that the ‘next big thing’ in their industry is the introduction of robots to conduct some surgical procedures. But a new study from Tokyo and New York has found that these devices have some [1]major [2]drawbacks with (1)sterility.

Researchers have discovered that surgical robots cannot be satisfactorily cleaned – an ominous finding, considering that machines are becoming more and more [3]common in operating rooms, including one New York hospital that recently acquired one to perform vaginal procedures, the UK’s *Daily Mail* reported.

The study’s findings reveal that it is absolutely impossible to clean robotic devices [4]thoroughly, meaning there is also no way to avoid the risk of a post-operative infection using a robotic surgical device.

“One of the top priorities for hospitals is to treat patients safely and with [5]minimal risk of infection,” said Yuhei Saito, RN, PHN, MS, the lead author of the study and an assistant professor at the University of Tokyo Hospital.

Saito added that the results of the study found that robotic surgical instruments may be putting patients (ア) risk because of the way such instruments are currently being cleaned. “(A)この問題に取り組む方法の一つは、外科用器具を洗淨する基準を新たに設けることです,” the lead author noted.

The study has been published in the journal *Infection Control & Hospital Epidemiology*, which is published by the Society for Healthcare Epidemiology of America.

To conduct the study, researchers analyzed 132 robotic and [6]ordinary surgical instruments (イ) a period of 21 months. Instruments were immediately [7]collected after they were used, in order to determine their level of contamination, the *Daily Mail* reported.

Scientists involved (ウ) the study used in-house cleaning methods, including manual procedures utilizing ultrasonication, as per the manufacturers’ instructions. They gathered measurements of protein concentration after three subsequent cleanings to gauge the total amount of residual protein.

Because of the [8]complex structure inherent to robotic instruments, they had a much greater protein resident and a lower cleaning efficacy* when

they were compared to ordinary instruments used [9]manually by surgeon.

As such, the researchers suggested (エ) their findings that it could become necessary to devise new cleaning standards that employ repeated measurements of residual protein rather than measuring contamination only one time after instruments have been cleaned.

As noted further by *Medical Xpress*, the cleanings were 97.6 percent effective for robotic instruments versus 99.1 percent effective for ordinary surgical instruments.

“These instruments are wonderful tools that allow surgeons to operate (オ) care, but completely decontaminating them has been a challenge for hospitals,” Saito said. The researcher added that the implementation of new cleaning procedures that include repeated measurements “of the level of contamination on an instrument more than once” would lead to the [10]reduction of post-operative infection in “many patients.”

Hospital-borne infections have been a rising problem in the U.S. for years. In 2012 *CBS News* reported that bloodstream infections caused at least 30 percent of the [then-] estimated 99,000 annual hospital-infection-related deaths in the U.S.

According to the magazine *Consumer Reports*, (B)院内感染率は同じ地域内においてもかなり違った . And *The Associated Press* reported that as many as 30 million surgical procedures are done each year, and that of those a half-million patients develop surgical-site infections, mostly caused by the staph bacteria.

“A lot of people think it’s all from the outside world, but these are your own germs,” Dr. Robert Weinstein, an infectious disease expert at Cook County’s Stroger Hospital in Chicago, told the AP in 2010.

(C)A pair of studies released around that time found that simply bathing patients before surgery helped cut down on post-surgical infections.

Questions

1 For each of the underlined words marked [1] to [10], give an English word with the opposite meaning. Your answers should reflect the context in which each word is used.

2 Find an English word from the passage with the opposite meaning to the underlined part marked (1) .

3 On the answer sheet, provide a suitable preposition to fill each of the blank spaces marked (ア) to (オ) .

4 Translate the underlined sentence marked (A) into English.

5 Translate the underlined sentence marked (B) into English.

6 Translate the underlined sentence marked (C) into Japanese.

[V] Are you for or against euthanasia – the deliberate killing of a person who is very ill and going to die, in order to stop them suffering? Write about 80 words in English, giving reasons and/or examples to support your answer.

[NOTES]

carcinogenic	having the potential to cause cancer
convulsion	a sudden shaking movement of the body that cannot be controlled
efficacy	the ability to produce a desired or intended result
fructose	a sugar of the hexose class found especially in honey and fruit
seizure	a sudden attack of illness, especially a stroke or an epileptic fit