

平成 24 年度入学者選抜学力検査問題

外 国 語

英 語

(医 学 部)

注 意 事 項

- 1 試験開始の合図があるまでこの冊子を開いてはいけない。
- 2 問題は㊦から㊨までである。
試験開始の合図のあとで問題冊子の頁数(1～8頁)を確認すること。
- 3 解答は必ず解答用紙の所定の欄に記入すること。
所定の欄以外に記入したものは無効である。
- 4 解答用紙は持ち帰ってはいけない。
- 5 問題冊子は持ち帰ってよい。

(この頁は空白)

I 次の英文を読み、空所(1)から(14)を補うのに適切な1語を下の語群内の(a)から(n)より選び、記号で答えなさい。なお、(4)は3ヶ所あり、すべて同じ語が入ります。

The time is now. Imagine your mother or father has suffered a heart attack. Deprived of its vital blood (1), a part of their heart is dying. Or imagine your grandmother or grandfather lying nearly motionless in their (2) home bed. With advanced age, complicated by pneumonia, they are about to end their lives. Or imagine a close friend has just entered the hospital with a massive infection. AIDS has left their body severely damaged by multiple diseases.

For most people, these circumstances would mean the end of life. Today's (3) can no longer help them. But all of you may be able to meet again in the far future. Does this sound like science (4)? Perhaps. But it may one day be possible through cryonics, which is the process of freezing human beings after death in the hope that medical science will be able to revive them in the future.

Although the idea of freezing people is relatively new, the notion of preserving them is old. In the 1770s, for example, Ben Franklin wrote that he wanted to be immersed in a barrel of wine until the time when he could be recalled to (5). It was not to be, but Franklin's dream lived on to be revived in our time as cryonics.

Cryonics has been a main topic of science (4) novels, the plot device in movies, and the subject of countless newspaper and magazine articles. Until 1964, however, cryonics remained firmly in the realm of (4). It was at this time that physics professor Robert Ettinger argued in his book that cryonics was indeed possible. Three years later, on January 12, 1967, 73-year-old James H. Bedford became the first human being to be cryonically frozen.

Ever since Bedford was frozen, cryonics has steadily increased in (6). Currently there are four cryonic institutions in the United States — two in California and one (7) in Michigan and Arizona. So far 80 people have been cryonically frozen from around the world, and another estimated 800 people have signed up to be frozen when they die. Their aim is to remain frozen in a state of suspended animation — perhaps for (8) — in the hope that medical science will be able to revive them in the future at a time when (9) exist for virtually all of today's diseases and when restoration to full function and health is possible.

Currently, when a person who has signed up to be cryonically suspended dies, a specific procedure must be carried out. First, before death, an individual must decide (10) to have his or her entire body frozen or just the head. If the whole body is to be frozen, it must be preserved upon death. Immediately after death — ideally within a matter of (11) — the patient is connected to a heart-lung machine and chemicals such as glucose* are circulated

with the oxygenated* blood to help minimize the freezing damage. At the same time, the patient's internal (12) is reduced as quickly as possible using cold packs.

If only the head will be frozen, a slightly different procedure must be carried out. The head must be surgically detached from the (13) of the body and preserved in a separate container. You may be wondering, "Why would I preserve my head?" The answer is, with some diseases the body is in a very poor condition. If this is the case and you choose to preserve your head only, you do so with the (14) that medical science will be able to create a healthy new body for you in the future.

— From Jayne Richter, *Cryonics* (1995), 一部改変.

Notes: glucose ブドウ糖 oxygenate 酸素を加える

語 群

- | | | | | |
|------------|---------------|-----------------|-------------|----------------|
| (a) belief | (b) centuries | (c) cures | (d) each | (e) fiction |
| (f) life | (g) medicine | (h) minutes | (i) nursing | (j) popularity |
| (k) rest | (l) supply | (m) temperature | (n) whether | |

II

次の英文を読んで下の質問に答えなさい。問1, 問3, 問4は日本語で解答すること。

The day after meeting Hilda I wrote a letter to the Rockefeller Foundation, applying for a job.

Neither Father nor Mother thought I would get in. "You have to have pull. It's an American thing, Rockefeller Foundation. You must have pull."

Mother said: "That's where they do all those experiments on dogs and people. All the important people of the Nanking* government also came here to have medical treatment, and sometimes took away a nurse to become 'a new wife.'"

⁽¹⁾ It made sense to me, typing in a hospital; I would learn about medicine, since I wanted to study medicine. And as there was no money at home for me to study, I would earn money, and prepare myself to enter medical school. I had already discovered that a convent-school* education was not at all adequate, and that it would take me at least three more years of hard study before being able to enter any college at all. Science, mathematics, Chinese literature and the classics... with the poor schooling given to me, it would take me years to get ready for a university.

"I will do it." But clenched* teeth, decision tearing my bowels, were not enough; there was no money, no money, my mother said it, said it until I felt as if every mouthful of food I ate was wrenched* off my father's body.

"No one is going to feed you doing nothing at home." Of course, one who does not work must not (A), which is called: "being settled at last." But with my looks I would never get married, I was too thin, too sharp, too ugly. Mother said it, Elder Brother had said it. Everyone agreed that I should work, because marriage would be difficult for me.

Within a week a reply came. The morning postman brought it, and I choked over my milk and coffee.⁽²⁾ "I'm to go for an interview. At the Peking Union Medical College. To the Director's office."

Father and Mother were pleased. Mother put the coffee pot down and took the letter. "What good paper, so thick." But how could we disguise the fact that I was not even fifteen years old? I had claimed to be sixteen in the letter. In fact, said Papa, it was not a lie since⁽³⁾ Chinese are a year old when born, and if one added the New Year as an extra year, as do the Cantonese* and the Hakkas*, who became two years old when they reach their first New Year (so that a baby born on December 31st would be counted two years old on the following January 2nd), I could claim to being sixteen.

— From Han Suyin, *A Mortal Flower* (1966), 一部改変.

Notes: Nanking 南京 convent school 女子修道院付属学校 clench 食いしばる
wrench もぎ取る Cantonese 広東人 Hakka 客家(漢族の下位集団の1つ)

問 1 下線部(1) It made sense to me について下記の問いに答えなさい。

- a. It が指している内容を記しなさい。
- b. 筆者が made sense と述べた根拠を2つ挙げなさい。

問 2 次の6語 get, unless, can, one, married, eat を並べ替えて空所(A)を埋めなさい。

問 3 下線部(2)について、筆者がこのような状態になった理由を説明しなさい。

問 4 下線部(3) it was not a lie について下記の問いに答えなさい。

- a. it が指している内容を記しなさい。
- b. 筆者の父親が not a lie と述べた根拠を説明しなさい。

Ⅲ 次の英文を読んで下の質問に答えなさい。すべて日本語で解答すること。

To take estrogen* or not to take estrogen? For millions of women approaching menopause*, no other decision stirs up more anxiety or stimulates more debate. On the one hand, study after study has shown that replenishing* lost stores of this hormone can prevent many of the ailments associated with aging—heart disease, osteoporosis*, perhaps even Alzheimer's*. On the other hand, many of these same studies also suggest that long-term use of estrogen increases the likelihood that a woman will develop breast cancer.

To undo this knot of contradictory advice, women have desperately sought better information. And last week the New England Journal of Medicine provided the best they're likely to get for some time. In the largest study of its kind, a team of researchers led by Francine Grodstein of Boston's Brigham and Women's Hospital tracked the health histories of some 60,000 post-menopausal nurses over a period of 18 years. The results boil down the benefits and risks of estrogen to a fairly concise set of percentages.

On average, Grodstein and her colleagues report, women who took hormone supplements for up to 10 years lowered their death rate from all causes an impressive $\frac{37\%}{(1)}$. Some women clearly benefited more than others, however. The mortality rate* for women with one or more risk factors for heart disease, for example, dropped 49% compared with only 11% for women with no risk factors (that is, women who are nonsmokers, who are not overweight and who don't have high blood pressure, diabetes or a family history of heart disease).

Estrogen users with family histories of breast cancer, on the other hand, did better than many might have expected, scoring a 35% drop in overall mortality. There could be many reasons for this, says Grodstein. For one thing, heart attacks and strokes* are more likely to be immediately lethal, so preventing them adds up to longer survival. For another, women on hormone therapy tend to be more closely monitored; their cancers are likely to be detected earlier.

Women who stayed on estrogen for more than 10 years, however, derived a more modest benefit. Reason? Their risk of dying from breast cancer shot up $\frac{43\%}{(2)}$, enough to offset the positive effects of estrogen, Grodstein says, but not enough to eliminate them entirely. Despite the rise in breast cancer deaths, the researchers found that long-term estrogen users still had a 20% lower death rate. Over the coming years, Grodstein and her colleagues hope to find out what happens when women use estrogen for even longer periods. Does their breast-cancer risk continue to rise, or does it level off? What happens to their risk of heart disease? "We don't know anything about the risks and benefits of keeping women on hormones for 20 and 30 years," says Grodstein.

In the absence of these data, what should women do? One option is to postpone long-term estrogen therapy until they are older. Women typically enter menopause between the ages of 45 and 55, but their risk of heart disease and osteoporosis doesn't really soar until they reach their 60s and 70s. By starting estrogen therapy later in life, it may be possible for women to obtain its benefits while reducing its power to harm.

— From J. Madeleine Nash, "Every Woman's Dilemma," *TIME*, June 30, 1997, 一部改変.

Notes: estrogen エストロゲン(女性ホルモンの一種) menopause 閉経
replenish 補充する osteoporosis 骨粗しょう症
Alzheimer's アルツハイマー病 mortality rate 死亡率 stroke 脳卒中

問 1 エストロゲン補充療法の効果と危険性をそれぞれ記しなさい。

問 2 下線部(1)37%と下線部(2)43%がそれぞれ何を示しているか説明しなさい。

問 3 心臓病の危険因子を5つ挙げなさい。

問 4 乳がんの家族歴がある女性でさえエストロゲン補充療法により死亡率を減少させることができたのはなぜか、考えられる理由を2つ挙げなさい。

問 5 エストロゲン補充療法の開始時期を遅らせても効果が期待できるのはなぜか、その理由を説明しなさい。

IV On virtually every job site in the world, behavior is a major part of a worker's overall evaluation. In Japanese universities these days, however, there is no formal system of evaluating student behavior on campus or in the classroom. Only extreme forms of inappropriate behavior can be addressed and only in limited ways. What is your opinion of bringing real-world behavior evaluation to the university campus and classroom? In about 90 words explain your answer. Also, indicate the number of words you have written at the end of the composition.