

(平 27 前)

外 国 語

英 語

(問題部分 1 ～11 ページ)

注意 解答はすべて答案用紙の指定のところに記入しなさい。

外国語 (英 語) 125 点

I 次の文章を読んで、問1～問4に答えなさい。(配点 35 点)

We are in the midst of a crisis of massive proportions and grave global significance. No, I do not mean the global economic crisis that began in 2008. At least then everyone knew that a crisis was at hand, and many world leaders worked quickly and desperately to find solutions. Indeed, consequences for governments were grave if they did not find solutions, and many were replaced in consequence.⁽¹⁾ No, I mean a crisis that goes largely unnoticed, like a cancer; a crisis that is likely to be, in the long run, far more damaging to the future of democratic self-government: a worldwide crisis in education.

Radical changes are occurring in what democratic societies teach the young, and these changes have not been well thought through. Thirsty for national profit, nations, and their systems of education, are heedlessly discarding skills that are needed to keep democracies alive.⁽²⁾ If this trend continues, nations all over the world will soon be producing generations of useful machines, rather than complete citizens who can think for themselves, criticize tradition, and understand the significance of another person's sufferings and achievements. The future of the world's democracies hangs in the balance.

What are these radical changes? The humanities and the arts are being cut away, in both primary/secondary and college/university education, in virtually every nation of the world. Seen by policy-makers as (A), at a time when nations must cut away all useless things in order to stay competitive in the global market, they are rapidly losing their place in curricula, and also in the minds and hearts of parents and children. Indeed, what we might call the humanistic aspects of science and social science — the imaginative, creative aspect, and the aspect of rigorous critical thought — are also losing ground as nations prefer to pursue short-term profit by the cultivation of (B) suited to profit-making.

This crisis is facing us, but we have not yet faced it.⁽³⁾ We go on as if everything were business as usual, when in reality great changes of emphasis are

evident all over. We haven't really deliberated about these changes, we have not really chosen them, and yet they increasingly limit our future.

We are pursuing the possessions that protect, please, and comfort us — what Tagore* called our material “covering.” But we seem to be forgetting about the soul, about what it is for thought to open out of the soul and connect person to world in a rich, subtle, and complicated manner; about what it is to approach another person as a soul, rather than as (C) or an obstacle to one's own plans; about what it is to talk as someone who has a soul to someone else whom one sees as similarly deep and complex.

The word “soul” has religious connotations for many people, and I neither insist on these nor reject them. Each person may hear them or ignore them. What I do insist on, however, is what both Tagore and Alcott* meant by this word: the faculties of thought and imagination that make us human and make our relationships rich human relationships, rather than relationships of (D) and manipulation. When we meet in society, if we have not learned to see both self and other in that way, imagining in one another inner faculties of thought and emotion, democracy is bound to fail, because democracy is built upon respect and concern, and these in turn are built upon the ability to see other people as human beings, not simply as objects.

注 Tagore タゴール(1861-1941)。インドの詩人, 哲学者。

Alcott オールコット(1799-1888)。米国の教育家, 社会改革家。

問 1 下線部(1)の意味する内容を 35 字以内の日本語で説明しなさい。ただし, 句読点も 1 字に数えます。

問 2 空所(A)～(D)に入る最も適切な語句を下から選び、記号で答えなさい。ただし、それぞれの語句は一度しか使えません。

- (ア) useless frills
- (イ) mere use
- (ウ) a mere useful instrument
- (エ) the useful and highly applied skills

問 3 下線部(3)の意味と最も近い文を下から一つ選び、記号で答えなさい。

- (あ) We are aware of the critical consequences of the changes in education which we have chosen, and we have already taken actions.
- (い) We are fully aware that great changes in education are going on all over the world, so we have carefully thought about them.
- (う) We are doing business as usual because the serious changes in business have not yet occurred.
- (え) Despite critical changes in education, we have not fully considered their serious consequences.

問 4 下線部(2), (4)を日本語に訳しなさい。

II 次の文章を読んで、問1～3に答えなさい。(配点35点)

In the animal kingdom, specific traits distinguish one group of animals from another. The beaks and feathers of birds, for example, set them apart from mammals and amphibians*. Furthermore, variations in those traits differentiate one kind of bird from another. For instance, ducks have long, wide and flat beaks, and geese have shorter, thinner and taller beaks. Nonetheless, birds also share many features — eyes, feet, legs, a tail and so on — with many mammals and amphibians. What allows some traits to vary so greatly, while other features
(1)remain relatively similar across a wide range of animals?

Some might say that a shared evolutionary history creates similarities, and adaptive responses to selective forces trigger differences. This answer provides some insight, but it does not explain all of nature's variation. Similar traits can arise independently in different animal lineages. For example, many biologists point to the development of human and octopus eyes. Both eyes have an eyelid, iris, lens, pupil* and retina*, but they are formed by completely different mechanisms. The human eye is an extension of the brain, whereas an inward-pocketing of the skin creates the octopus eye. Functionally, these eyes differ as well. The focal length of the octopus lens is fixed; the octopus focuses by moving the entire lens. In humans, changing the shape of the lens focuses the eye on objects at varying distances.

Although many evolutionary modifications could arise, not all outcomes are equally feasible. For instance, some traits are not possible in specific animals because of their developmental toolkit. Developmental toolkits can be compared to Lego building blocks, because both dictate what can be built. A standard set
(2)of rectangular blocks, for example, can serve as building material for many
unique structures, but nothing with truly rounded edges. In the same way, an organism relies on limited developmental processes, pathways and interactions.

Every living animal fits one of 35 distinct shapes, or body plans, all of which

originated in the Cambrian period around 500 million years ago. Because these new animal shapes appeared relatively rapidly, the event is referred to as the Cambrian explosion. In this case, “rapid” is based on an evolutionary timescale; the explosion occurred over a period of at least 5 to 10 million years.

Even after many millions of years — 10 times as long as the Cambrian explosion itself — no new body plans have evolved, despite major changes, including the movement from living in water to living on land. Consequently, developmental processes might constrain the possibilities.

For one thing, structural constraints impede some forms. Consider the fictional King Kong, a scaled-up version of a gorilla. All of his proportions are the same as a normal gorilla, but his overall size is much larger. In real animals, the structural properties of bone limit the size and proportions of the creatures, especially ones that live on land. Here’s a simplified mathematical explanation of Kong’s impossibility based only on the thigh bone.

Let’s say that King Kong is five times taller than a normal-sized gorilla. A bone’s strength depends on its cross-sectional area*, which is a function of the square of its radius*. King Kong’s thigh bone is five times bigger in all dimensions, including its radius, so its strength will be increased by 5^2 , or 25. King Kong’s volume, on the other hand, varies according to length and cross-sectional area, which means that it increases by 5×25 , or 125. With this giant gorilla’s weight increasing five times more than his strength, his legs would be crushed. Such a discrepancy between strength and weight would apply to the rest of Kong’s body as well. So apes could increase in size, but structural constraints impose limits.

注 amphibians 両生動物

pupil ^{どうこう} 瞳孔

retina 網膜

cross-sectional area 断面積

radius 半径

問 1 下線部(1), (2)を日本語に訳しなさい。

問 2 キング・コングの背の高さが普通のゴリラの5倍だとして、それが現実にはあり得ないと言える構造上の理由を60字以内の日本語で説明しなさい。ただし、句読点も1字に数えます。

問 3 本文の内容と合致するものを下から二つ選び、記号で答えなさい。

- (ア) The beaks and feathers of birds are one way to differentiate mammals from amphibians.
- (イ) Human eyes and octopus eyes have no common characteristics.
- (ウ) Many evolutionary modifications could occur, but not all outcomes are equally possible.
- (エ) All the body plans of the animals alive today appeared in the Cambrian period.
- (オ) Many new body plans of animals appeared after the Cambrian explosion to adapt to the shift from living in water to living on land.

Ⅲ 次の文章を読んで、問 1 ～ 4 に答えなさい。(配点 30 点)

On Eleanor Black's 71st birthday a flock of birds flew into her kitchen through a window that she had opened every morning for 40 years. They flew in all at once, without warning or reason, from the tree at the corner, where birds had sat every day since President Roosevelt's time. They were huge and dirty and black, the size of cats practically, much larger than she had ever imagined birds. Birds were so small in the sky. In the air, even in the clipped tree 10 (1) yards from the window, they were nothing more than faint dots of color. Now they were in her kitchen, batting against the ceiling and the yellow walls she had just washed a couple of months ago, and their stink and their cries and their frantic knocking wings made it hard for her to breathe.

She sat down and took a water pill. They were screaming like wounded animals, flapping in tight circles around the light fixture so that she got dizzy looking at them. She reached for the phone and pushed the button that automatically dialed her son, who was a doctor.

"Bernard," she said, "there's a flock of crows in the flat."

"It's 5 in the morning, Mom."

"It is? Excuse me, because it's 7 a.m. out here. (A) But the crows are flying in my kitchen."

"Mother?"

"Yes?"

"Have you been taking all your medicines?"

"Yes, I have."

"Has Dr. Gluck put you on any new ones?"

"No."

"What did you say was the matter?"

"There's a whole flock of crows in the flat."

Bernard didn't say anything.

"I know what you're thinking," she said.

"I'm just making the point that sometimes new medicines can change people's perceptions."

"Do you want to hear them?"

"Yes," he said, "that would be fine. (B)"

She held the receiver up toward the ceiling. The cries were so loud she knew he would pick them up, even long distance.

"Okay?" she said.

"I'll be damned."

"What am I supposed to do?"

"How many are there?"

"I don't know."

"What do you mean, you don't know?"

"They're flying like crazy around the room. (C)"

"Are they attacking you?"

"No, but I want them out anyway."

"How can I get them out from Denver?"

She thought for a second. "I'm not the one who went to Denver."

He breathed out on the phone, loud, like a child. He was chief of the department at Denver General Hospital. "I'm just making the point," he said, "that I can't grab a broom in Colorado and get the birds out of your place in New York."

"Whose fault is that?"

(2)

"Mom," he said.

"Yes?"

"Call the SPCA.* (D) They have a department that's for things like this. They'll come out and get rid of them."

"They're big."

"I know," he said. "Just call the SPCA. Okay?"

“Okay,” she said.

He paused. “You can call back later to let us know what happened.”

“Okay.”

“Okay?”

“Okay.” She waited a moment. “Do you want to say anything else?”

“No,” he said.

注 SPCA Society for the Prevention of Cruelty to Animals(動物虐待防止協会)

問 1 下線部(1)を日本語に訳しなさい。

問 2 空所(A)～(D)に入る最も適切な文を下から選び、記号で答えなさい。ただし、それぞれの文は一度しか使えません。

- (ア) How can I count them?
- (イ) I forgot.
- (ウ) Tell them what happened.
- (エ) Let me hear them.

問 3 下線部(2)について、エレノアが伝えたかった意味として最も適切なものを下から一つ選び、記号で答えなさい。

- (a) Life changes, and we have to accept this.
- (b) You should not come here and help me.
- (c) You should not have moved to Denver.
- (d) I should have moved to Denver with you.
- (e) I should have tried to use a broom.

問 4 本文の内容と合致するものを下から三つ選び、記号で答えなさい。

- (あ) Eleanor lives in an apartment in New York.
- (い) Eleanor's son is a doctor working in Denver, Colorado.
- (う) Eleanor's doctor has given her new medicines.
- (え) At first, Bernard doubts that there are crows in Eleanor's apartment.
- (お) Bernard has decided to come to New York and help his mother with the crows.
- (か) Bernard has promised to call back Eleanor later.

Ⅳ 次の文章を読んで、問 1 と問 2 に答えなさい。(配点 25 点)

国際的に見て日本はもともと「社会的孤立」度の高い国であるとされている。この場合「社会的孤立」とは、家族以外の者との交流やつながりがどのくらいあるかという点に関わるもので、日本社会は、自分の属するコミュニティないし集団の「ソト」の人との交流が少ないという点において先進諸国の中で際立っている。

(広井良典『コミュニティを問い直す一つながり・都市・日本社会の未来』

[一部改変])

問 1 下線部を英語に訳しなさい。

問 2 「社会的孤立」について、あなた自身の考えを 80 語程度の英語で述べなさい。