

(平 31 前)

外 国 語

英 語

(問題部分 1 ～ 9 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 ～ 4 に答えなさい。(配点 30 点)

The establishment of a colony on Mars has been a dream for decades. Inevitably some people have objected to the idea of colonizing Mars on both ideological and practical grounds. Some object to humans living on Mars because they would harm whatever bacterial life forms might be present on the planet. Others oppose Mars settlements because they disagree with the idea of using the Red Planet as a “backup” in case the Earth is destroyed. Those in favor of colonizing Mars, however, look to spread the human race beyond our single planet. The practical considerations of surviving long term on a world without a breathable atmosphere, no surface water, exposure to radiation, and extremes of heat and cold all have to be addressed first. Mars colonists could survive in domed cities, extracting and recycling resources from the Martian environment. However, a more interesting plan for the settlement of the Red Planet involves a process called terraforming, turning the dangerous environment of Mars into something resembling Earth.

Billions of years ago, Mars was more like Earth, with a thick atmosphere as well as oceans and rivers of surface water. The planet may well have had complex life forms. However, sometime in the distant past, Mars lost its (A). When Mars found itself without the protection of that field, solar wind relentlessly stripped it of its atmosphere, quickly turning the planet into the frozen desert it currently is. While a number of schemes exist to restore Mars’ atmosphere, creating a runaway greenhouse process that would raise its temperature, NASA and some academic researchers recently came up with a simple way to achieve the process naturally. The idea involves the creation of an ⁽¹⁾electromagnetic shield between Mars and the Sun to protect the Red Planet from solar wind. Without the solar wind stripping it away, the atmosphere of Mars would gradually become thicker. Soon the temperature on the Martian surface would become high enough to release the trapped (B) at the poles, accelerating the (C). Water ice at the poles would melt, giving Mars back some measure of its oceans and rivers. All humans would have to do is introduce genetically designed plants and

animals to create a new Martian (D). The process of turning Mars into a new Earth could take place in the span of a single human lifetime. That contrasts with previous schemes to terraform Mars that would take anywhere from several hundred to several thousand years.

The scheme to build an electromagnetic shield in space is still at the conceptual stage. The engineering problems of building the thing and maintaining it essentially forever would be astronomical. However, the prospect of returning Mars to its former state as a warm, wet world where ⁽²⁾life could flourish is an appealing one. Mars could be transformed into a place where not just a few people, but many millions would be able to move to in order to start a new life. The effects for human civilization would be beyond evaluation.

問 1 空所(A)～(D)に入る最も適切なものを下からそれぞれ一つ選び、記号で答えなさい。ただし、同じ記号は一度しか使えません。

- (ア) space colony
- (イ) ecosystem
- (ウ) greenhouse effect
- (エ) carbon dioxide
- (オ) natural resources
- (カ) magnetic field
- (キ) atomic heat

問 2 下線部(1)の内容を具体的に 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 3 下線部(2)を日本語に訳しなさい。

問 4 本文の内容と合致する文を下から二つ選び、記号で答えなさい。

- (ア) NASA believes the scheme to terraform Mars will be highly appreciated because it involves a difficult task of engineering and maintenance.
- (イ) NASA and other researchers estimate the new scheme to terraform Mars would be completed in a shorter period of time than that outlined in previous plans.
- (ウ) Most scientists oppose the idea of colonizing Mars even though they look to spread the human race beyond our single planet.
- (エ) Even if we successfully transform Mars into a habitable planet, most people would be unwilling to move there to start a new life.
- (オ) Scientists assume that Mars used to have almost the same atmosphere as Earth, suggesting the possibility that it once held life.

Ⅱ 次の文章を読んで、問 1 ～ 4 に答えなさい。(配点 35 点)

Barely 3 percent of the American work force cycles or walks to work with any frequency, despite the obvious merits: decreased risks for lifestyle-related diseases, environmental benefits and lower transportation costs. Ask people why they avoid what's known as active commuting, as many surveys have, and the primary reason cited is time. Those things take too long, most say.

⁽¹⁾ They're probably wrong. A new study published last month shows that people often overestimate the time required to commute actively, a miscalculation especially common when someone has secured a parking permit near the office.

For the study, researchers at Pennsylvania State University asked the school's faculty, staff and students to complete an extensive series of online questionnaires about their fitness, health, commuting and parking habits, comfort and ability on a bike or as pedestrians, distance from home to their main workplace on campus and how long they thought it would take them to either cycle or walk that distance. Only a few of the 505 respondents went by foot or bike; most of them were students. Estimates of commuting times were then compared with the corresponding route times calculated by Google Maps. The researchers independently timed some of the routes by walking or riding them.

The survey participants — faculty and staff members above all — proved to be generally poor at guessing active-commuting times. About 90 percent of their estimates were too (A) by at least 10 minutes. The few assessments (B) to Google's were almost always made by riders or walkers. Parking availability and distances affected the estimates. Those with parking permits, a fiercely sought-after campus amenity, tended to overestimate active-commuting times significantly; the (C) someone lived to the workplace, the (D) the guesses. Confidence had an outsize effect, too. The people surveyed, especially women, who had little bicycling experience or who did not feel physically fit thought that active commuting would require considerably more time than the Google calculations.

The study is limited, of course, because it relies on a narrow, self-selected group of respondents to provide information about themselves, a topic on which people can be surprisingly unreliable. The published results also did not investigate such pressing active-commuting concerns as hygiene, showers or the logistics of carrying changes of clothes. But the study's results do indicate that time may be less of a barrier to active ⁽²⁾commuting than many might anticipate, says Melissa Bopp, the study's senior author.

問 1 下線部(1)について、Those things の指す内容を明らかにしたうえで、日本語で説明しなさい。

問 2 空所(A)～(D)に入る最も適切なものを下からそれぞれ一つ選び、記号で答えなさい。ただし、同じ記号は一度しか使えません。

- | | | |
|------------|-----------|------------|
| (ア) better | (イ) close | (ウ) closer |
| (エ) long | (オ) good | (カ) poorer |

問 3 下線部(2)を、「アクティブ(ヴ)」、「コミューティング」ということばを使わずに日本語に訳しなさい。

問 4 本文の内容と合致する文を下から二つ選び、記号で答えなさい。

- (ア) Many surveys have avoided asking about active commuting.
- (イ) Few of the respondents who cycled and walked were students.
- (ウ) Students were better than professors and staff at estimating their commute time.
- (エ) The researchers sometimes used Google Maps to check the actual time each commute took.
- (オ) Fit people were better able to guess the time it would take them to commute by bicycle or foot.

Ⅲ 次の文章を読んで、問 1 ～ 5 に答えなさい。(配点 30 点)

They were tall, burly men in rugby jerseys with torn-off sleeves that exposed their muscles and they had almost passed when one of them turned. He must have said something because the entire group halted and looked. They stared at the small European woman with the powder blue parasol standing beside a pink baby-grand piano as cargo ships unloaded around her.

A brainwave forced a cry from Mrs. Patterson's lips. She shuffled towards them. "Excuse me, hello, excuse me!"

The men gathered about, smelling of tuna fish.

"I was wondering if you would all be so kind as to help me out. You see, I've bitten ⁽¹⁾off rather more than I can chew. I must move that..." Their gaze followed her small pale hand to the piano sitting on the dock. "...up there." Their heads followed her finger back to the large wooden house high on the hillside.

Malakai Saulo, the smallest man in the group, stepped forward. "We're on our way home, Mrs. —"

"— Patterson."

"Yes, we know who you are. We have lived here our whole lives."

"Yes, of course you have..." she said. There was now a hint of pleading in her tone.

"I was just wondering if you good men would help me."
(A) ~~~~~

They looked at one another. Someone cracked his knuckles.

"Listen Mrs. Patterson," said Malakai, "we wake up at five a.m. Monday to Friday. We start work at six a.m. and we work hard all day gutting, slicing, canning fish. Today we did over twelve hundred tuna and we are paid only enough money to feed our families and send our children to school. All we want to do now is go home and drink a cold beer and go swimming with our kids." The men grunted in approval at Malakai's speech.

"Alright, how much then?" said Mrs. Patterson.

"How much for what?" said Malakai.
(B) ~~~~~

“How much money will it take for you to move that piano?”

“This isn’t about money, Mrs. Patterson. It’s about tired men who have done an honest day’s work and want to go home to their families.”

“Alright, ten dollars,” she said.

“Ten dollars each?”

“Ten dollars total.”

“We’ll do it for fifteen.”
(C)~~~~~
“Fifteen?”

“Each.”

“No way! That’s outrageous!” said Mrs. Patterson.
(D)~~~~~
“No, Mrs. Patterson, that’s capitalism.”

Mrs. Patterson’s chest swelled. ⁽²⁾
⁽³⁾~~~~~
“Now, you look here...”

Malakai shrugged and turned to leave, the men following. Mrs. Patterson’s cheeks shook, her eyebrows clenched and a sound grew in her chest. It worked its way to her throat and leapt from her lips, a sound more shrill than the cannery siren. “NOOOO!” She felt faint. It was the heat, the smell of the docks, the canniness of the cannery men. And that damn piano! That damn pink piano sitting there on the dock like a big helpless baby.

“Alright!” she cried.

The men halted. They turned around, teeth flashing, and swept past her onto the dock where they assembled about the piano; ten big muscled men with size forty-six shoes and legs as tough as tree roots. Malakai counted and on “three” the piano rose into the sky in one momentous action.

問 1 下線部(1)のイディオムはこの場合何を指すのか。最も適切なものを下から一つ選び、記号で答えなさい。

- (ア) She ate too much tuna for lunch.
- (イ) She had something she couldn’t carry alone.
- (ウ) She didn’t have enough money left to pay the men.
- (エ) She didn’t know who to ask for help.

問 2 下線部(2)について, *that* の指す内容を明らかにしたうえで, 日本語で具体的に説明しなさい。

問 3 波線部(A)～(D)にある表現はどのような行為を指しているのか。最も適切なものを下からそれぞれ一つ選び, 記号で答えなさい。ただし, 同じ記号は一度しか使えません。

- (ア) greeting
- (イ) counter-offering
- (ウ) offering
- (エ) clarifying
- (オ) requesting
- (カ) rejecting

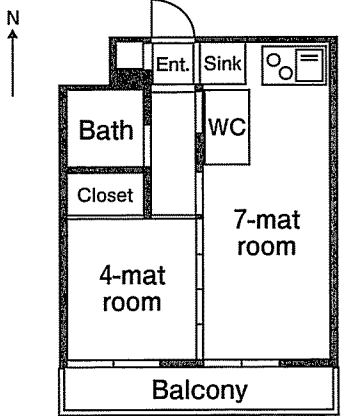
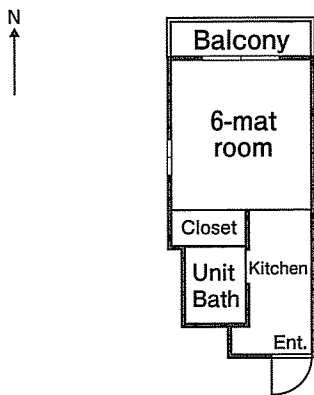
問 4 下線部(3)の発言は途中で終わっているが, その続きにパターソン夫人は何を言おうとしたと考えられるか。最も適切なものを下から一つ選び, 記号で答えなさい。

- (ア) “I’m not paying that much.”
- (イ) “That’s not enough.”
- (ウ) “Can you see this?”
- (エ) “Here you are.”

問 5 結局パターソン夫人は謝礼をいくらあげることになるのか。最も適切なものを下から一つ選び, 記号で答えなさい。

- (ア) 10 dollars
- (イ) 20 dollars
- (ウ) 30 dollars
- (エ) 100 dollars
- (オ) 150 dollars

IV Imagine you are going to rent accommodation from April. The two apartments below are available in an area you like. Answer the following questions. (配点 30 点)

<p>APARTMENT 1</p> <p>Monthly rent ¥110,000</p> <p>Size 38.00 m²</p> <p>Deposit ¥110,000</p> <p>Key money ¥110,000</p> <p>Year built 2016</p> <p>Nearest station 7 min. walk</p>	
<p>APARTMENT 2</p> <p>Monthly rent ¥55,000</p> <p>Size 21.00 m²</p> <p>Deposit ¥55,000</p> <p>Key money ¥0</p> <p>Year built 1996</p> <p>Nearest station 10 min. walk</p>	

- (1) Which apartment would you choose and why? Write your answer in English (around 60 words).

- (2) In Japan, key money (礼金) is paid to the owner as a token of gratitude at the start of each new rental contract. Some people say that this custom is behind the times and we should stop doing it. What do you think? Give reasons for your opinion (around 60 words).

