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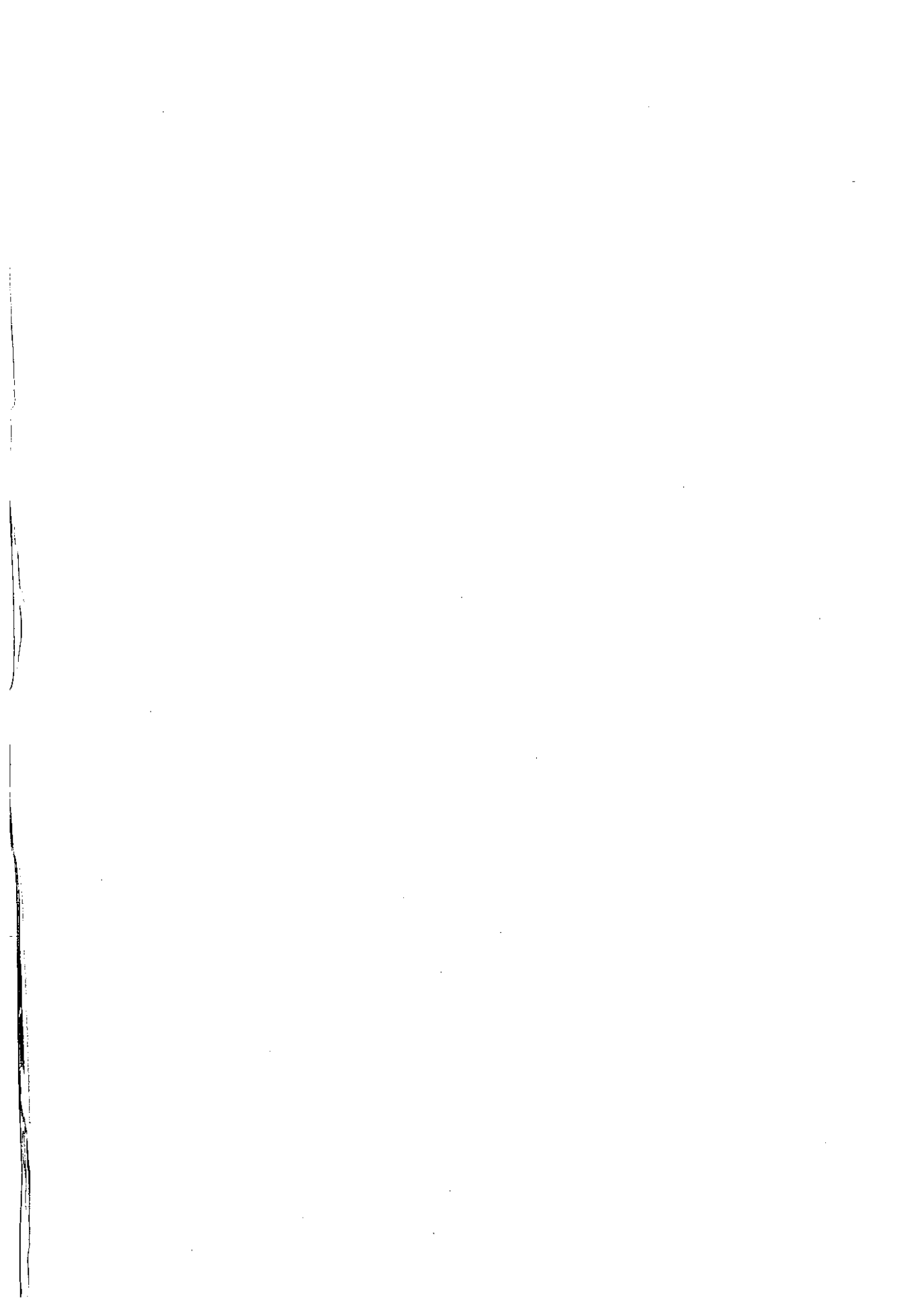
外 国 語

英 語

(問題部分 1 ~ 10 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1～5に答えなさい。(配点35点)

Many American middle and high school students stumble into classrooms before the sun has fully come up. Some have forgotten their homework, many will fall asleep in class, and a few act as badly to their friends as to their parents. Most of these teens just aren't sleeping enough. A group of professionals at the National Sleep Foundation announced that middle and high school age students need eight to ten hours of sleep a night, yet nearly two-thirds of 17-year-olds report sleeping less than seven hours a night, according to a recent report by an American medical association.

A growing number of psychologists have felt so strongly about the problem⁽¹⁾that they've taken the lead in efforts to push back middle and high school start times. They want teens to be able to roll out of bed closer to their natural wake-up time of 8 a.m., but this is not compatible with most school schedules. Fewer than one in five American middle and high schools begin their days at 8:30 or later.

“(A),” said Lisa J. Meltzer, PhD, a sleep researcher in the department of pediatrics* at National Jewish Health in Denver, who lobbies for later start times. “We are requiring them to wake up at a time when their brain would otherwise be asleep. I don't think we're giving adolescents the opportunity to be the best they can be.”

Mary A. Carskadon, PhD, a professor of psychiatry and human behavior at Brown University, was the first to show that as kids reach middle school age, their circadian rhythms** change, making it easier for them to stay up later. In contrast with younger children, whose circadian rhythms push them to fall asleep early- to mid-evening, adolescents have sleep drives that don't kick in until later in the evening. A common misbelief is that adolescents are tired, irritable, or uncooperative because they choose to stay up too late, or are difficult to wake in the morning because they are lazy.

Some say that later start times will lead to kids simply going to bed later, but research doesn't support that concern. Pushing back school start times by 75 minutes results in as much as 50 minutes more sleep for the average middle school student, according to a study of 205 students by psychologist Amy R. Wolfson, and in certain situations, it means 15 to 45 minutes extra sleep for the average high school student. In schools that start at 8:30 or later, 60 percent of students sleep at least eight hours on school nights, a University of Minnesota study found.

Some parents and teachers' groups have raised other practical concerns with these proposals. Hannah Bruce says that many parents in her area schools don't want a later start time because it would cut down on the time their children have to participate in afternoon activities, clubs, and sports. Some teachers' groups have objected, too, saying that they didn't want their schedules disrupted, or worried about extended commutes in rush hour traffic.

Although school start times might not change in the near future, there is some good news for teenagers: life is likely to get better soon. Once adolescents reach their late teens, their need for sleep declines a bit, according to the National Sleep Foundation's recommendations. Also, they start getting a little more shut-eye when their schedule becomes more flexible out of high school.

注 *department of pediatrics 小児科

**circadian rhythms 24時間ごとの生活リズム

問 1 下線部(1)を日本語に訳しなさい。

問 2 下線部(2)の内容を具体的に 30 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 空所(A)に入る最も適切なものを下から一つ選び、記号で答えなさい。

- (あ) Adolescents are sleeping way too much
- (い) The brains of adolescents aren't asleep
- (う) They have opportunities to sleep more
- (え) We are robbing adolescents of sleep
- (お) Youngsters often wake up too late

問 4 下線部(3)の内容を、“Parents”と“Teachers' groups”の観点から、それぞれ 30 字以内の日本語でまとめなさい。ただし、句読点も 1 字に数えます。

問 5 下線部(4)の内容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。

- (あ) Adolescents close their eyes more often out of high school.
- (い) New start times will soon be put in place for high schools.
- (う) Recommendations for adolescent sleep needs will stop.
- (え) Sleep needs decrease as adolescents get older.
- (お) There would be less time for students to commute to school.

II 次の文章を読んで、問1～4に答えなさい。(配点30点)

Scientific research usually begins with a question about a group of individuals. For example, a researcher may be interested in how the number of younger brothers and sisters affects the academic performance of first-born children. Or a researcher may want to examine different body shapes of men and women. In the first example, the researcher is interested in the group of children who were the first ones born in their families. In the second example, the researcher wants to compare the group of all men with the group of all women. (A)—it could be a group of elephants in Africa, convenience stores in major cities, cars produced in a factory, or anything else a researcher wants to study. In science, we call the entire group of individuals that we wish to study a population*.

As you can imagine, a population can be quite large—for example, every woman on the planet Earth. (B), limiting the population to women who are between the ages of 20 and 40 and live in India. This is still a very large number. In contrast, perhaps the researcher would like to study the population of people who speak five or more languages. This would be much smaller. Populations can vary in size from extremely large to very small, depending on how researchers define them. In practice, populations are typically very large, such as the population of fourth-grade children in Australia or the population of small businesses in Spain.

Because (C), it usually is impossible for a researcher to study every single individual in the population of interest. Therefore, they usually select a smaller group from the population and then only study the individuals in the selected group. In science, a set of individuals selected from a population is called a sample**. For example, a researcher may be interested in the population of second-grade students in Canada but only select four classes in the second grade at one Canadian elementary school to be the sample. There are two

important issues a researcher must consider when selecting a sample—the size of the sample and how well it represents the population.

Just as we saw with populations, samples can have very different sizes. Imagine that you want to use a poll to learn about political opinions of people living in a large city of 5 million people just before they vote for a new mayor. You are going to ask people if they believe the current mayor is doing a good job. Since the poll will be conducted by telephone, you define your population as people who live in the city and have telephones. Because it would take more time than you can spend to call everyone in the city that owns a telephone, you call 100 people. If you have more time, (D)—1,000 people, for example. Although it would be best to study every individual in a population that you have defined, it is not necessary.

When selecting a sample, the researcher usually tries to choose individuals that are similar in important ways to the members of the population. In other words, a sample should be representative of its population. If the members of the sample have characteristics that are typical of the members of the population, the results from studying your sample will likely be very close to results that would come from studying the whole population. Getting a representative sample is not easy, but there are several special procedures for selecting members that a researcher can follow.

注 *population 母集団

**sample 標本

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。なお、文頭に來る場合も小文字で始めています。

- (あ) a researcher might be more restrictive
- (い) populations are typically very large
- (う) the group need not consist of people
- (え) you could use a larger sample

問 2 下線部(1)を日本語に訳しなさい。

問 3 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。

- (あ) A population is usually defined as a group of people in a city.
- (い) A population is usually selected from one part of a sample.
- (う) A sample is usually smaller in size than a population.
- (え) Researchers do not conduct studies about a single person.
- (お) Samples should be selected without any special method.
- (か) The size of a population depends on how it is defined.

問 4 本文の次に來るべき段落の内容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。

- (あ) definitions of populations and samples used by researchers
- (い) description of different sample-selecting techniques
- (う) explanation for why samples are not helpful for research
- (え) how first-born Canadian children perform on school tests
- (お) several examples of the different sizes of populations

Ⅲ 次の文章を読んで、問1～4に答えなさい。(配点35点)

One of the unusual things a visitor might experience during a trip to England comes when riding the London Underground. These days, there are few trains running on the Circle Line. They used to come along every few minutes, but now, generally you wait for a very long time to see one. On one particular morning, a great many of us had been standing on a platform at Gloucester Road station for about twenty-five minutes without any sign of a train. I noticed a man standing beside me who appeared to be a tourist and looked very confused.

Thinking that a joke would be a good start to a conversation, I called out to him, "I remember when trains used to go by here. Now, I just come to enjoy the scenery."

"(A)?" he asked in a worried voice.

He was an American and was clearly new to London and possibly to British humor.

"I was just joking," I said gently. Pointing to the many people standing on the platform with us, I continued, "We wouldn't all be standing here if there weren't really any trains."⁽¹⁾

He replied a little too seriously, "(B)."

I promised, "One will come. Just hold on a while longer," and smiled again. I couldn't think of anything else to say, so I just looked forward instead, concluding that I had made a mistake trying to start a friendly conversation with such a serious person.

After a few more minutes, I couldn't help myself and peaked over to see how my new American friend was handling the continued delays. He was now studying a fully unfolded Underground map and seemed to have given up on the Circle Line.

"(C)?" he asked after catching my glance.

"Oh, Piccadilly Line trains aren't stopping here these days," I informed him.

He looked at me suspiciously, wondering if this was another of my British jokes.

"They're doing repairs to the tracks, so Piccadilly Line trains aren't stopping at this station for the next six months," I continued.

"(D)?" he said in wonder.

"Well, there are two of them," I answered with a laugh. Again, it became immediately clear that the joke had gone over his head.

I watched him studying his map. "You may also want to know that the Circle Line doesn't go in a circle," I added helpfully. He looked up with real interest.

"The trains used to go around in endless circles, but now they all stop at Edgware Road and everybody has to get off one train and get on another."

"(E)?" he asked.

"No one knows," I answered.

"(F)," he said.

"Yes, it is," I agreed happily. Just then a train pulled in and everyone moved forward to board.

"Well, I hope you have a good trip," I said to my new friend.

He got on, but didn't say thanks or goodbye or anything. I hoped that maybe by the time he finished his trip he had figured out how to use the Underground, and perhaps more importantly, how to enjoy the challenges of travel a little more.

問 1 下線部(1)を日本語に訳しなさい。

問 2 空所(A)～(F)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。

- (あ) But I feel like I've been standing here forever
- (い) Don't the trains go by here
- (う) It's taking them six months to repair the tracks
- (え) This sure is a weird country
- (お) Where do I go to get the Piccadilly Line
- (か) Why do they stop

問 3 著者がアメリカ人の旅行者に旅を終えるまでに身につけてほしいと思っていることを二つ、それぞれ 20 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 4 本文の内容と合致する文を下から三つ選び、記号で答えなさい。

- (あ) Both the author and the American were waiting for a train.
- (い) The American could not find the Circle Line on his Underground map.
- (う) The American laughed at many of the author's British jokes.
- (え) The author felt the American did not appreciate his help.
- (お) The author told a joke in order to begin a friendly conversation.
- (か) The Piccadilly Line trains were repaired in six weeks.
- (き) The trains on the Circle Line still come around every few minutes.

IV Read the paragraph below and answer the following two questions.

(配点 25 点)

Every day of our lives, we make many different decisions, both small and big. Sometimes we make decisions based on good reasons; other times we make decisions without careful consideration. One example of the latter is called the Bandwagon Effect. In this situation, you would choose to do something just because many other people are doing it.

- (1) Describe a specific example of how the Bandwagon Effect has affected one of the decisions you have made in the past. The answer must be written in English. (around 40 words)

- (2) Do you agree with the statement that the Bandwagon Effect has a stronger influence on teenagers than adults when they are making decisions? Include at least two reasons to support your answer. The answer must be written in English. (around 60 words)