英　　語

(問　題)

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注　意　事　項

1. 試験開始の指示があるまで、問題冊子および解答用紙には手を触れないこと。
2. 問題は２～11ページに記載されている。試験中に問題冊子の印刷不鮮明、ページの落丁・乱丁及び解答用紙の汚損等に気付いた場合は、手を挙げて監督員に知らせること。
3. 解答はすべて、ＨＢの黒鉛筆またはＨＢのシャープペンシルで記入すること。
4. マーク解答用紙記入上の注意
   (1) 印刷されている受験番号が、自分の受験番号と一致していることを確認したうえで、氏名欄に氏名を記入すること。
   (2) マーク欄にははっきりとマークすること。また、訂正する場合は、消しゴムで丁寧に、消し残しがないようによく消すこと。

マークする時	●良い	○悪い	⊘悪い
マークを消す時	○良い	○悪い	⊘悪い

5. 記述解答用紙記入上の注意
   (1) 記述解答用紙の所定欄（２カ所）に、氏名および受験番号を正確に丁寧に記入すること。
   (2) 所定欄以外に受験番号・氏名を書いてはならない。
   (3) 受験番号の記入にあたっては、次の数字見本にしたがい、読みやすいように、正確に丁寧に記入すること。

数字見本	0	1	2	3	4	5	6	7	8	9

   (4) 受験番号は右詰めで記入し、余白が生じる場合でも受験番号の前に「０」を記入しないこと。

(例)　3825番⇒

万	千	百	十	一
	3	8	2	5

6. 解答はすべて所定の解答欄に記入すること。所定欄以外に何かを記入した解答用紙は採点の対象外となる場合がある。
7. 試験終了の指示が出たら、すぐに解答をやめ、筆記用具を置き解答用紙を裏返しにすること。
8. いかなる場合でも、解答用紙は必ず提出すること。

I Read this article and answer the questions below.

You press a button and wait for your elevator. How long before you get impatient and agitated? Theresa Christy says 20 seconds.

As a mathematician steeped in the theories of vertical transportation at Otis Elevator Co., Ms. Christy, 55, has spent a quarter-century developing systems that make elevators run as perfectly as possible—which means getting the most riders possible into a car in less than 20 seconds. "Traditionally, the wait time is the most important factor," she says. "The thing people hate the most is waiting."

Developed in the 19th century, elevators transformed urban living, real-estate markets, and skylines around the world. As an Otis research fellow, Ms. Christy (A) and on prestigious projects like the 1,483-foot-high Petronas Towers, in Malaysia, for a time the world's tallest buildings.

During the recent $550 million upgrade of the Empire State Building, in New York City, Ms. Christy was asked whether she could help get more people up to the observation deck. She said she couldn't get more people into a car but could (B). So she increased the elevators' speed by 20 percent, to 20 feet per second. Now the cars can rise 80 floors in about 48 seconds, 10 seconds faster than before.

Rather than having riders wait for the first available car, Otis Elevator's Compass system has riders input the floor they want by keypad or touch screen. They are then told which car to take. The result: a more orderly lobby and a faster ride.

The challenges Ms. Christy deals with depend on the place. At a hotel in the holy city of Mecca, in Saudi Arabia, she has to make sure that the elevators can clear a building quickly enough to get people out five times a day for prayer.

In Japan, riders immediately want to know which car will serve them—indicated by a light and a pinging sound—even if the elevator won't arrive for 30 seconds. That way, people can line up in front of the correct elevator.

Japan also boasts, in Ms. Christy's opinion, the smoothest, best-riding elevators. "When you get into an elevator there, you sometimes think you are stuck in the elevator because the motion is so smooth and quiet," she says. But that service (C) extra costs and slower speeds.

Another problem: How many people fit in an elevator? In Asia, more people will board a car than in Europe or New York, Ms. Christy says; Westerners prefer more personal space. When she programs an elevator system, she uses different weights for the average person by region. The average American is 22 pounds heavier than the average Chinese.

At their core, elevators are a mode of transportation. Serving passengers well is constrained by the number of elevators, their speed, how fast their doors open and close, and how many people can fit in a car. In the U.S., these factors come together 18 billion times a year, each time a passenger rides an elevator.

That experience is at the heart of what Ms. Christy does. From her sparse second-floor office in a leafy office park in Farmington, in Connecticut, she writes strings of code that allow elevators to do essentially (D) —including the building's owner, who has to allocate considerable space for the concrete shafts that house the cars. Her work often involves watching computer programs that simulate elevator decision-making.

"I feel like I get paid to play videogames. I watch the simulation, and I see what happens, and I try to improve the score I am getting," she says.

Here is a typical problem: (E)

For Ms. Christy, these are mathematical problems with no one optimum solution. In the real world, there are so many parameters and combinations that everything changes as soon as the next rider presses a button. In a tall building with six elevators and 10 people trying to move between floors, there are millions of possible combinations—too many, she says, for the elevator's computer to process in split seconds.

"We are constantly seeking the magic balance," says Ms. Christy. "Sometimes what is good for the

individual person isn't good for the rest."

A named inventor on 14 patents, Ms. Christy has a few more awaiting approval. She refers to the latest of them as the "surfboard feature." The idea came from a joke with colleagues when they were leaving one night after a dinner out. They half-seriously worried whether someday elevators might display a rider's weight. (Elevators already calculate the total weight in the car.)

The joke got Ms. Christy thinking of a feature that would allow people with a bulky or heavy item to have a car to themselves. So she and her colleagues created a system that can be programmed to allocate an empty car to a single user. The feature would give users like hotel staff a numeric code that is punched in before entering the elevator. (A hotel in Hawaii considered using it to prevent surfers from disturbing other guests with their surfboards—hence its name.) The feature is now in general use in hotels and office buildings.

Source: http://online.wsj.com/article/SB10001424127887324469304578143200385871618.html

1 Use the seven words below to fill in blank space (A) in the best way. Indicate your choices for the second, fourth, and sixth positions.

(a) gets (b) on (c) problems (d) the
(e) to (f) toughest (g) work

2 Choose the most suitable answer from those below to fill in blank space (B).

(a) add to the number of cars
(b) ask them to walk more quickly
(c) design a more spacious car
(d) move them up more quickly
(e) reduce the speed of each car

3 Choose the most suitable answer from those below to fill in blank space (C).

(a) comes with
(b) focuses on
(c) looks to
(d) pays for
(e) takes off

4 Choose the most suitable answer from those below to fill in blank space (D).

(a) the best work for the largest machines
(b) the fastest rise for the lightest passengers
(c) the greatest good for the most people
(d) the heaviest load for the cheapest price
(e) the quickest speed for the least effort

5 Choose the most suitable order of sentences from those below to fill in blank space (E).

(a) A passenger on the sixth floor wants to descend.
(b) Is it the right choice to make that car stop again?
(c) That would be the best result for the sixth-floor passenger, but it would make the other people's rides longer.
(d) The closest car is on the seventh floor, but it already has three riders and has made two stops.

6 Choose the most suitable answer from those below to complete the following sentence.
The "surfboard feature" is designed to

(a) allow hotel clerks to assign codes to keep track of belongings such as surfboards.
(b) enable passengers to use an elevator for themselves when carrying bulky items.
(c) identify hotels, like some in Hawaii, where surfers are offered larger rooms.
(d) provide recreational opportunities to employees interested in surfing.
(e) show the weight of individual passengers as they step into an elevator.

7 Choose the most suitable answer from those below to complete the following sentence.
The writer notes that as far as Ms. Christy is concerned,

(a) differences between cities like Mecca and New York have no effect on the design of elevator systems.
(b) it is impossible to come up with a perfect solution when designing an elevator system.
(c) Japan's elevators are best known for holding a large number of people.
(d) there are some interesting similarities between designing elevator systems and goods used in sports like surfing.
(e) when upgrading the Empire State Building, her principal task was to get more people into the elevator.

Ⅱ Read this article and answer the questions below.

Meditation—the practice of thinking deeply in silence—is fast becoming a fashionable tool for improving your mind. With mounting scientific evidence that the practice can enhance creativity, memory, and scores on standardized intelligence tests, interest in its practical benefits is growing. The typical "mindfulness" training program or conference for business and tech leaders promises attendees insight into how meditation can be used to improve individual performance, leadership, and productivity.

This is all well and good, but if you stop to think about it, there's a bit of a disconnect between the (perfectly reasonable) pursuit of these benefits and the purpose for which meditation was originally intended. Gaining competitive advantage on exams and increasing creativity in business weren't of the utmost concern to Buddha and other early meditation teachers. As Buddha himself said, "I teach one thing and one only: that is, suffering and the end of suffering." For Buddha, as for many modern spiritual leaders, the goal of meditation (A). The heightened control of the mind that meditation offers was supposed to help its practitioners see the world in a new and more sympathetic or compassionate way, allowing them to break free from the categorizations—us/them, self/other—that commonly divide people from one another.

But does meditation work as promised? If Buddha's original intention was to relieve suffering, can it be shown that meditation actually reduces it?

To put the question to the test, my lab, led in this work by the psychologist Paul Condon, joined with the neuroscientist Gaëlle Desbordes and the Buddhist lama Willa Miller to conduct an experiment. We recruited 39 people from the Boston area who were willing to take part in an eight-week course on meditation (and who had never taken any such course before). We then randomly assigned 20 of them to take part in weekly meditation classes, which also required them to practice at home using guided recordings. The remaining 19 were told that they had been placed on a waiting list for a future course.

After the eight-week period of instruction, we invited the participants to the lab for what they were told would be an experiment to examine their memory, attention, and related cognitive abilities. But as you might anticipate, what actually interested us was whether those who had been meditating would exhibit greater compassion in the face of suffering. To find out, we staged a situation designed to test the participants' behavior before they were aware that the experiment had begun.

When a participant, let's say a male, entered the waiting area for our lab, he found three chairs, two of which were already occupied. (B)

The results were striking. Although only 16 percent of the nonmeditators gave up their seats—a rather depressing fact—the proportion rose to 50 percent among those who had meditated. This increase is impressive not solely because it occurred after only eight weeks of meditation, but also because it did so within the context of a situation known to discourage considerate behavior: witnessing others ignoring a person in distress—what psychologists call the bystander effect—reduces the odds that any single individual will help. (C), the meditation increased the compassionate response significantly—by a factor of three.

Although we don't yet know why meditation has this effect, one of two explanations seems likely. The first rests on meditation's documented ability to enhance attention, which might in turn increase the odds of noticing someone in pain (D) one's own thoughts. My favored explanation, though, derives from a different aspect of meditation: its ability to foster a view that all beings are interconnected. The psychologist Piercarlo Valdesolo and I have found that any marker of affiliation between two people, even something as subtle as tapping their hands together in synchrony, causes them to feel more compassion for each other when distressed. The increased compassion of meditators, then, might stem directly from meditation's ability to dissolve the artificial social distinctions—ethnicity, religion, ideology, and the like—that divide us.

Supporting this view, recent findings by neuroscientists Helen Weng, Richard Davidson, and colleagues confirm that even relatively brief training in meditative techniques can alter neural functioning in brain areas associated with an understanding of others' distress—areas whose responsiveness is also conditioned by a person's degree of felt associations with others.

So take heart. The next time you meditate, know that you're not just benefiting yourself, you're also benefiting your neighbors, community members, and as-yet-unknown strangers by increasing the odds that you'll feel their pain when the time comes, and act to lessen it as well.

Source: David DeSteno, "The Morality of Meditation," The New York Times (July 8, 2013)

1 Choose the most suitable answer from those below to complete the following sentence.
The writer suggests that
(a) enduring the physical and mental suffering caused by meditation leads to self-control.
(b) people with good memories and a sense of creativity are able to meditate more effectively.
(c) the function of meditation is to develop an imagination disconnected from the real world.
(d) the original aim of meditation was different from that of the typical training program now popular among business and tech leaders.
(e) the teaching of Buddhism combined with meditation can rapidly improve the skills necessary for commercial success.

2 Choose the most suitable answer from those below to fill in blank space (A).
(a) could easily become something else
(b) had to be made simpler
(c) was as simple as that
(d) was easier than ending suffering
(e) was easy to forget

3 Choose the most suitable answer from those below to complete the following sentence.
The experiment conducted by the writer was one in which
(a) a Buddhist lama agreed to participate for the first time.
(b) a total of 39 people from the Boston area took the same meditation classes.
(c) the eight-week period turned out to be too short to produce useful results.
(d) the primary aim was to test the participants' memory, attention, and related abilities.
(e) the true purpose was not initially revealed to the participants.

4 Choose the most suitable order of sentences from those below to fill in blank space (B).
(a) As he waited, a fourth person, let's say a female, using crutches and wearing a boot designed for a broken foot, entered the room and sighed in pain as she leaned uncomfortably against a wall.
(b) Given this dilemma, would he act compassionately, giving up his chair for her, or selfishly ignore her?
(c) Naturally, he sat in the remaining chair.
(d) The other two people in the room—who, like the woman on crutches, secretly worked for us—ignored the woman, thus confronting the participant with a moral problem.

5 Choose the most suitable answer from those below to fill in blank space (C).
(a) At last
(b) Consequently
(c) Nevertheless
(d) Strictly speaking
(e) Unfortunately

6 Use the six words below to fill in blank space (D) in the best way. Indicate your choices for the second, fourth, and sixth positions.
(a) as (b) being (c) in (d) lost
(e) opposed (f) to

7 Choose the most suitable answer from those below to complete the following sentence.
The writer suggests that meditation may
(a) discourage neighbors from associating with one another.
(b) help overcome the various divisions that exist in modern societies.
(c) increase human ability to synchronize hand-tapping under stress.
(d) lead to a better understanding of human brain activity.
(e) reduce the chance of getting a heart attack.

Ⅲ Read this article and answer the questions below.

Alan Krueger, an economic adviser to U.S. President Barack Obama, gave a speech in 2012 about the relationship between income inequality and social mobility across the generations. In that speech, he referred to the work of Miles Corak of the University of Ottawa, who has shown that more unequal economies tend to have less fluid societies. Mr. Corak observes that in some places, like America and Britain, around 50 percent of income differences in one generation are due to differences in the previous generation (in Scandinavia, with its greater social equality, the number is less than 30 percent).

Even that may paint too rosy a picture. Mr. Corak's work (A) income between just two generations: fathers and sons. That is out of necessity; good data covering three or more generations are scarce. But reliance on limited data could lead to exaggerated estimates of social mobility.

Gregory Clark, an economist at the University of California, Davis, notes that across a single generation some children of rich parents are bound to suffer random episodes of bad luck. Others will choose low-paying jobs for personal reasons, like a wish to work for charity organizations. Such statistical "noise" makes society (B) than it is. Extending the resulting mobility rates to include many generations gives a misleadingly sunny view of long-term equality of opportunity. Mr. Clark suggests that family history has large effects that persist for much greater periods of time. Fathers matter, but so do grandfathers and great-grandfathers. Indeed, it may take as long as 500 years for high- and low-status families to produce descendants (C) ending up in various income ranges.

Mr. Clark confronts the lack of good data by gathering information from rare family names. You can draw conclusions about mobility trends from family names in two ways. One method relies upon past links between certain names and high economic status. In a 2012 paper, for instance, Mr. Clark examines prosperous Swedes. The unusual family names of 17th-century aristocrats and the Latinized family names (such as Linnaeus) adopted by highly educated 18th-century Swedes are both rare in the Swedish population as a whole. By tracking the continued overrepresentation of those names in elite positions, he is able to work out mobility rates as they appear over the long term.

As late as 2011 aristocratic family names appear among the ranks of lawyers—considered a high-status position in Mr. Clark's study—at a frequency almost six times that of their occurrence in the population as a whole. Mr. Clark calculates that even in famously mobile Sweden, some 70-80 percent of a family's social status is transmitted from generation to generation across centuries. Other economists use similar techniques to reveal comparable immobility over such periods of time in societies from 19th-century Spain to 20th-century China. Inherited advantage can be observed for a very long time.

A second method relies on the overrepresentation of rare family names in high- or low-status groups that occur by chance at some point in the past. If very few Britons are called Micklethwait, for example, and people with that name were exceptionally wealthy in 1800, then you can measure mobility over the long term by studying how long it takes the Micklethwait name to lose its wealth-predicting power. In a paper written by Mr. Clark and Neil Cummins of Queens College, City University of New York, the authors use data from inheritance records from the 19th century to classify rare family names into different wealth categories. They then use similar data to see how common each family name is in these categories in subsequent years. Again, some 70-80 percent of economic advantage seems to be transmitted from generation to generation.

Mr. Clark's conclusion is that the underlying rate of social mobility is both low and surprisingly constant across countries and eras: the introduction of universal secondary education scarcely affects mobility rates in Britain from generation to generation, for example. This consistency, he suggests, shows that low mobility may result from differences in underlying "social competence." Such competence can be inherited and is reinforced by the human tendency to mate with partners of similar characteristics and ability.

(D) This finding is lower than his own rate but still higher than Mr. Corak's single-generation estimates.

Careful work by Jason Long of Wheaton College and Joseph Ferrie of Northwestern University in the United States provides another perspective. They have spent the past decade studying census returns from America and Britain, identifying families with children in one count, tracking down the same children as adults in another, and thereby building up a multigenerational database. An analysis of three generations shows that in both America and Britain the effect of high (or low) incomes in one generation lasts for at least two more. Yet their study also suggests it is possible to break patterns of immobility. Although American and British mobility rates were similar by the middle of the 20th century, America's social order was considerably more fluid than Britain's in the 19th century. The past has a significant influence on the present. But in the right circumstances, this influence can apparently be weakened.

Source: "Nomencracy," The Economist (February 9, 2013)

1 Use the seven words below to fill in blank space (A) in the best way. Indicate your choices for the second, fourth, and sixth positions.

(a) compare (b) draws (c) levels (d) of
(e) studies (f) that (g) upon

2 Choose the most suitable answer from those below to fill in blank space (B).

(a) look less equal
(b) look more changeable
(c) sound less fluid
(d) sound more generous
(e) sound more productive

3 Choose the most suitable answer from those below to fill in blank space (C).

(a) for the benefit of
(b) in great contrast to
(c) of relative importance to
(d) on the basis of
(e) with equal chances of

4 Choose the most suitable answer from those below to complete the following sentence.
Other economists have supported Clark's research by showing that in terms of social mobility

(a) previous patterns in Spain and China were not much different from those in Sweden.
(b) Sweden is a special case with advantages over Spain or China.
(c) Sweden, Spain, and China have all entered a new stage of development.
(d) the Scandinavians have continued where the Spanish and the Chinese left off.
(e) trends in Sweden are more similar to those in Spain than in China.

5 Choose the most suitable answer from those below to complete the following sentence.
Research into social mobility has used unusual family names because

(a) they are frequently found among the exceptionally wealthy.
(b) they are most closely associated with members of the upper class.
(c) they are often a good indication of a particular social status.
(d) they belong to families that tend to keep good records.
(e) they predict what kind of name will be common in the future.

6 Choose the most suitable order of sentences from those below to fill in blank space (D).

(a) By using the same data for a family-name analysis, Mr. Clark calculates that 60 percent of income differences in Malmo result from economic advantages in previous generations.

(b) For example, a Swedish analysis of the city of Malmo, using data covering individual families over four generations, finds a relationship between a child's educational success and that of his great-grandparents.

(c) Studies using multi-generation data offer a slightly more encouraging picture.

(d) This is hardly an optimistic view of opportunity.

7 Choose the most suitable answer from those below to complete the following sentence.

A study by Long and Ferrie makes the point that

(a) American social patterns tend to be copied in other parts of the world.

(b) social mobility is greater among those who do not have children.

(c) the present remains largely unaffected by events in the distant past.

(d) there is more room for social mobility than some studies seem to claim.

(e) upward movement in British society was widespread in the 19th century.

Ⅳ Read this dialogue and answer the questions below.

Ralph: Look, Alice. They just delivered the DIY bookcase I ordered. I think I'll start putting it together right away.

Alice: Are you sure? It's almost time for dinner, and tomorrow's Saturday. If you wait until morning, you'll have all day to do that.

Ralph: Oh, it's just a bookcase. I can get it done in less than an hour.

Alice: (A) Remember the dining set? It took you the whole weekend to finish that.

Ralph: But that was a table and four chairs. This is just a couple of shelves. Here, I'll open the box and show you.

Alice: That certainly looks like more than just a couple of shelves to me.

Ralph: You mean these bags of screws and things? (B) —the instructions will tell me everything I need to know. Let me see now.

Alice: I think that sheet of instructions folds out some more. And I (C), too.

Ralph: Hmm. Say, do you know what a "dowel" is? And the instructions talk about a "dado." Ever hear of that?

Alice: Obviously they should have included a dictionary along with the instructions. You go ahead, but don't (D).

1 Choose the most suitable answer from those below to fill in blank space (A).

(a) You can say that again.
(b) You have my word on it.
(c) You must be kidding.
(d) You're my last hope.
(e) You've saved the best for last.

2 Choose the most suitable answer from those below to fill in blank space (B).

(a) Do help yourself
(b) Not to worry
(c) Now or never
(d) Take your time
(e) Way to go

3 Use the six words below to fill in blank space (C) in the best way. Indicate your choices for the second, fourth, and sixth positions.

(a) back (b) look (c) on (d) suggest
(e) the (f) you

4 Use the seven words below to fill in blank space (D) in the best way. Indicate your choices for the second, fourth, and sixth positions.

(a) expect (b) for (c) me (d) to
(e) up (f) wait (g) you

V **Read the statement below and write a paragraph giving at least two reasons why you agree or disagree with it. Write your answer in English in the space provided on your written answer sheet.**
(*It is suggested that you spend no more than 15 minutes on this section.*)

"People would be happier if they could live forever."

[END OF TEST]