

英 語

(問 題)

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注 意 事 項

1. 問題冊子および記述解答用紙は、試験開始の指示があるまで開かないこと。
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・乱丁および解答用紙の汚れ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. 解答はすべて解答用紙の所定欄に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. 受験番号および氏名は、試験がはじまってから、解答用紙の所定欄に正確に記入すること。記述解答用紙の所定欄（2か所）には受験番号と氏名を、マーク解答用紙の所定欄には氏名のみを記入すること。受験番号の記入にあたっては、次の数字見本に従い、正確に正しいに記入すること。

数 字 見 本	0	1	2	3	4	5	6	7	8	9
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5. マーク解答用紙のマーク欄には、はっきり記入すること。また、訂正する場合は、消しゴムで正しいに、消し残しがないようよく消すこと。

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

6. いかなる場合でも、解答用紙は必ず提出すること。
7. 試験終了後、問題冊子は持ち帰ること。

I Read this article and answer the questions below.

Around 1970, psychologist Walter Mischel launched a classic experiment. He left 4-year-olds one at a time in a room with a bell and a marshmallow. If they rang the bell, he would come back immediately, and they could eat the marshmallow. If, however, they did not ring the bell and (A) in his own time, they could then have two marshmallows. In videos of the experiment, you can see the children squirming, kicking, hiding their eyes—desperately trying to exercise self-control so they can wait and get two marshmallows. Their performance varied widely. Some broke down and rang the bell within a minute. Others lasted 15 minutes.

The children who waited longer got into better colleges and had, on average, more successful lives as adults. The children who rang the bell quickest were more likely to become bullies. They received worse teacher and parental evaluations 10 years later. They were also more likely to have drug problems at age 32.

(B)

Yet the Mischel experiments, along with everyday experience, tell us that self-control is essential. Young people who are patient and can delay gratification can sit through sometimes boring classes to get a degree. They can perform repetitive tasks in order to, say, master a language. They can avoid drugs and alcohol. For people without self-control skills, however, school is a series of failed challenges. No wonder they drop out. Life is a parade of foolish decisions: teenage pregnancy, drug use, gambling, truancy, and crime. If you are a policymaker and you are not talking about core psychological traits such as delayed-gratification skills, then you are just (C).

The research we do have on delayed gratification tells us that differences in self-control skills are deeply rooted but can be changed. Differences in the ability to focus attention and exercise control emerge very early, perhaps as soon as nine months. But there is no consensus on how much of the ability to exercise self-control is (D) and how much is (E).

The ability to delay gratification, like most skills, depends upon socioeconomic status and parenting styles. Children from poorer homes do much worse on delayed-gratification tests than children from middle-class homes. That is probably because children from poorer homes are more likely to have their lives disrupted by marital breakdown, violence, moving, etc. They think in the short term because there is no predictable long term.

The good news is that while differences in the ability to delay gratification emerge early and persist, that ability can be improved with conscious effort. Moral lectures do not work. Sheer willpower does not seem to work either. The children who resisted eating the marshmallow did not stare directly at it and exercise iron discipline. On the contrary, they were able to resist their appetites because they were able to think about other things. What works is creating stable, predictable environments for children, in which good behavior and practice (F). Young people who are given a series of tests that demand self-control get better at it.

This pattern would be too obvious to mention if it were not so largely ignored by educators and policymakers. Somehow we have entered a world in which we focus mainly on structural reforms and standardized tests, but largely overlook the moral and psychological traits that are at the heart of actual success. Mischel tried to interest New York schools in programs based on his research. However, needless to say, he found almost no takers.

Source: http://articles.sfgate.com/2006-05-09/opinion/17294721_1_self-control-experiment-human-nature

- 1 Use six of 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) back (b) come (c) for (d) him
(e) them (f) to (g) waited
- 2 Choose the most suitable order of sentences from those below to fill in blank space (B).
- (a) Reducing class sizes, creating more charter schools, increasing teacher pay, and providing universal day care are often adopted as solutions.
(b) The Mischel experiments are worth noting because people in the policy world spend a great deal of time thinking about how to improve the quality of education, how to reduce poverty, and how to make the most of human capital.
(c) The results of these structural reforms are almost always disappointingly modest.
(d) Yet when policymakers address these problems, they come up with structural remedies.
- 3 Choose the most suitable answer from those below to fill in blank space (C).
- (a) avoiding a fundamental issue
(b) guaranteeing a favorable outcome
(c) identifying the most effective solution
(d) losing the final opportunity
(e) solving a longstanding problem
- 4 Choose the most suitable pair of words from those below to fill in blank spaces (D) and (E).
- (a) general—detailed
(b) hereditary—environmental
(c) mental—physical
(d) public—private
(e) simple—complicated
- 5 Choose the most suitable answer from those below to fill in blank space (F).
- (a) follow through
(b) give in
(c) move over
(d) pay off
(e) turn around
- 6 Choose the most suitable answer from those below to complete the following sentence.
The writer notes that programs based on Mischel's research were
- (a) not suitable replacements for standardized tests.
(b) seldom adopted by schools.
(c) too complex to be understood.
(d) too simple to deal with moral and psychological issues.
(e) tried but found to be ineffective.

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

With regard to education, the writer believes that _

- (a) delayed gratification is unaffected by household income.
- (b) Mischel's studies in the 1970s influenced the course that reform actually followed.
- (c) more attention should be paid to teachers' salaries than to class size.
- (d) policymakers should concern themselves less with structural matters than with psychology and human nature.
- (e) the main reason students fail in school is that teachers do not provide sufficient discipline.

II Read this article and answer the questions below.

How often do you wish you could speak to someone who has died? How many questions would you like to ask your departed loved ones? Thanks to new technology, the opportunity to do so is not far off.

Huge chunks of our lives are, of course, already recorded on the Web—not only in the emails and the documents we write, but in our photographs and videos, which we share on sites like Facebook, Flickr, and YouTube. Companies such as Microsoft, Google, and Vodafone offer free storage space in return for our life data: accessing our memories, tastes, and records. But what happens to all this when we die?

A European Commission-sponsored project called “Companions” created a trial computer program called “Senior Companion”: a conversational “agent”—or software program—designed to interact with a person for a long period, learning his or her tastes and habits. For the moment, this might best be suited to elderly people, living alone and wanting company, (A) when to take pills and so on. It could also, however, help build up a narrative picture of a person’s life for future generations.

At present, only those with talent, resources, and leisure tend to write autobiographies. (B)

This may seem a futuristic project, but the Japanese have already shown there is a market for surprisingly primitive devices of this sort if they can achieve an acceptable level of naturalness of voice and manner. The technical basis of these programs is a research area called “machine learning”: the ability of a computer to learn, within limits, things it did not know before. (C) of this is voice-recognition technology: the iPad now has software available that gives close to full transcription of voice to text.

The same underlying process would allow a Companion to imitate its owner’s voice. Car navigation systems, for example, offer a wide range of plausible artificial voices with a variety of accents. After years of observation, a Companion could certainly produce a convincing approximation of its owner’s voice. It would also have access to a huge store of images, emails, and documents telling its owner’s life story. From this, it is not (D) a Companion continuing after its owner’s death to answer questions about his or her life—in the owner’s own voice.

Ray Kurzweil, the computer pioneer who built the first dictation typewriter, is devoting his old age to health products so he can stay alive long enough to benefit from what he believes will be (E): the reproduction of every human brain cell in a computer, or *in silico*, as he puts it. A Companion that simulated a dead person would be much less revolutionary: it might imitate behavior but would have no tie to any structure in the departed’s body or brain. It would be no more, perhaps, than a computerized and updated form of the goodbye videos from the deceased now shown at funerals, or on some modern gravestones, which have, instead of a stone memorial, a small solar-powered video of the deceased activated by a switch.

There are already four major types of death site available on the Internet: memorial and tribute sites created for the already dead; “locked boxes” of assets and secrets for survivors that protect the individual’s interests after death; “legacy” sites containing last wishes and emails to be revealed or sent after an individual’s death; and “life story” sites that manage autobiographical material for an individual creator, to leave some form of self-presentation of their life.

Given what already exists, then, we shall surely begin to see devices like the Companion in the coming years. Some may think that a program that assumes the voice and screen image of its deceased owner is an unacceptable form of “immortality.” But it seems inevitable that, in the future, the dead will speak—so (F).

Source: *Prospect* (October 20, 2010)

- 1 Use six of 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) be (b) might (c) need (d) remembered
(e) reminded (f) to (g) who
- 2 Choose the most suitable order of sentences from those below to fill in blank space (B).
- (a) Elderly people often possess a large number of old photographs that can be transformed into digital images.
(b) However, if the Companions project or its successors work, anyone could assemble some form of autobiography for their children.
(c) In this way, the program can store a wealth of memories after the owner's death.
(d) The Senior Companion starts by asking its owner who is in each photograph, where it was taken, and what its importance is.
- 3 Choose the most suitable answer from those below to fill in blank space (C).
- (a) A similar view
(b) A successful example
(c) The main disadvantage
(d) The only function
(e) The unexpected result
- 4 Choose the most suitable answer from those below to fill in blank space (D).
- (a) important to understand
(b) hard to imagine
(c) possible to predict
(d) necessary to accept
(e) useful to consider
- 5 Choose the most suitable answer from those below to fill in blank space (E).
- (a) a great environmental challenge
(b) a move away from technology
(c) a return to a simpler model
(d) the most economical procedure
(e) the next great technical advance
- 6 Choose the most suitable answer from those below to fill in blank space (F):
- (a) an early death becomes a likely outcome
(b) it now seems that the role of the Internet is in doubt
(c) it's worth considering now what form that conversation should take
(d) technology has less value as you grow older
(e) we should improve both the quality and availability of health care for the elderly
- 7 Choose the most suitable answer from those below to complete the following sentence.
The writer believes that
- (a) a computer that speaks and acts like someone who has died is not acceptable.
(b) computers will soon be able to replicate the human brain.
(c) more people will have to write their own autobiographies in the future.
(d) software programs will increasingly help older people share part of their lives.
(e) talking machines will never sound as convincing as natural voices.

III Read this article and answer the questions below.

The big social revolution of the last few years has not been some great political event; but the way our social world has been redefined by social-networking sites like Facebook. Darwin and his contemporaries could not have imagined such things, even in their wildest dreams. For a privileged few like Darwin himself, the geographical scatter of their friends might have been greatly enlarged by the newly introduced postal service and a lot of letter-writing. But, in general, the reach of most people's social worlds was pretty much confined to those they encountered in person. It seems that the social-networking sites have broken through the limits of time and geography that (A) in Darwin's day.

One of the curious by-products of this technological revolution has been an odd kind of competition about the number of friends you have on your personal site. Some of these claims have been, to say the least, exaggerated, with the number of registered friends running into the tens of thousands in some cases. However, even a quick glance around this strange little electronic world immediately tells us two things. First, the distribution of the number of friends is highly skewed: most people have a pretty average number of "friends" on their list, with only a handful having numbers above two hundred. Second, there is an issue about what really counts as a friend. Those who have very large numbers—that is to say, larger than about two hundred—invariably know little or nothing about most of the individuals on their list.

(B)

Primate societies seem to differ from those of other animals in two key respects. The first is the dependence on intense social bonds between individuals, which gives primate groups a highly structured appearance. Primates cannot join and leave these groups as easily as animals in the relatively unstructured herds of migrating zebras or the swarms of many insects. Other species may have groups that are highly structured in this way—elephants and prairie dogs are two obvious examples—but these animals differ from primates in another respect. This is that primates use their knowledge about the social world in which they live to form more complex alliances with each other than do other animals.

This social-intelligence hypothesis is supported by a strong connection between the size of the group, and hence complexity of the social world, and the relative size of the neocortex—the outer surface layer of the brain that is mainly responsible for conscious thinking—in various species of nonhuman primates. This result seems to reflect a limitation on the number and/or quality of relationships that an animal of a given species can keep track of simultaneously. Just as a computer's ability to handle complex tasks is limited by the size of its memory and processor, so the brain's ability to manipulate information about the constantly changing social domain may be limited by the size of its neocortex.

This relationship between neocortex and group size in the nonhuman primates raises an obvious question. What size of group would we predict for humans, given our larger neocortex? Using the relationship for monkeys and apes as our basis, we arrive at a group size of about 150—the limit on the number of meaningful social relationships that humans can have, a figure that has been given the title *Dunbar's Number*.

Is this apparent cognitive limit on the size of human groups a reflection of a memory overload problem (we can only remember 150 individuals, or only keep track of all the relationships involved in a community of 150), or is the problem a more subtle one—perhaps something to do with the complexity of the relationships involved?

The (C) the more likely, pushing us toward the view that it is something about the *quality* of the relationships that is important, not just their absolute number. We find an upper limit on group size because this is the limit of the number of relationships that an animal can maintain at a high level of complexity. It is not just a matter of remembering who is who, or how x relates to y and both relate to me, but rather how I can use my knowledge of the individuals involved to manage those relationships when I need to call on them.

Source: Robin Dunbar, *How Many Friends Does One Person Need?*

- 1 Choose the most suitable answer from those below to fill in blank space (A).
- (a) inspired people to invent social technologies
 - (b) prevented people from leaving their homes
 - (c) reduced the importance of written communication
 - (d) restricted people's range of social contacts
 - (e) rewarded those in higher social positions
- 2 Choose the most suitable answer from those below to complete the following sentence.
The writer points out that as far as online friendships are concerned,
- (a) a realistic upper limit would not exceed a couple of hundred.
 - (b) individuals usually register as friends less often than do small groups.
 - (c) it is very difficult to register large numbers of friends at the same time.
 - (d) no one actually claims to have thousands of friends.
 - (e) there is no way to determine the real names of online friends.
- 3 Choose the most suitable order of sentences from those below to fill in blank space (B).
- (a) And this, in turn, is because primates have much bigger brains for body size than any other group of animals.
 - (b) By the standards of more sensible mammals and birds, they are unusually tangled and interdependent.
 - (c) This heritage is one of deep social complexity involving personal relationships.
 - (d) To investigate what this means, we must begin with our evolutionary heritage as members, along with monkeys and apes, of the primate family.
- 4 Choose the most suitable answer from those below to complete the following sentence.
The writer uses the underlined expression "highly structured appearance" to
- (a) contrast primate societies with those of elephants and prairie dogs.
 - (b) defend primates against the charge of poor social behavior.
 - (c) describe the complexity of social relationships among primates.
 - (d) emphasize the safety enjoyed by primates that live in groups.
 - (e) explain the tendency of primates to want to leave the group.
- 5 Choose the most suitable answer from those below to complete the following sentence.
The size of the human neocortex seems to be the reason that
- (a) conscious thinking is a characteristic unique to human beings.
 - (b) humans are more resistant to change than monkeys are.
 - (c) humans can manage a larger number of relationships than monkeys and apes.
 - (d) neither humans nor other primates developed highly organized societies.
 - (e) the social-intelligence hypothesis applies only to human beings.
- 6 Use six of the seven words below to fill in blank space (C) in the best way. Indicate your choices for the second, fourth, and sixth positions.
- | | | | |
|----------|--------------|------------|------------|
| (a) as | (b) evidence | (c) points | (d) second |
| (e) sets | (f) the | (g) to | |

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

The writer concludes that

- (a) a higher number of personal relationships results in a higher quality of friendship.
- (b) Dunbar's Number should be increased when social groups grow more complex.
- (c) it is time to remove artificial limits on the size of human communities.
- (d) managing social relationships goes beyond establishing a certain number of friends.
- (e) the larger the social group, the less intelligent are the members.

IV Read this dialogue and answer the questions below.

Carl: Toby! Is that really you? My goodness, how long has it been?

Toby: Carl, I (A). I haven't seen you since that night in Venice back in 1974.

Carl: Gosh! (B)? How time flies. So how long have you been coming to the gym?

Toby: Ever since my doctor told me to lose some weight.

Carl: Well, whatever you're doing, it seems to be working. I hardly recognized you. So tell me, which of these modern machines here in the gym would you (C) someone in my condition to use? I really want to impress people.

Toby: Well, (D), Carl, you're fat, bald, and almost sixty. There's only one machine here I would advise you to use if you want to impress anybody.

Carl: Oh, really? Which one?

Toby: The ATM machine downstairs in the lobby.

- 1 Use six of 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) expected (b) for (c) here (d) meet
(e) never (f) to (g) you

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

(a) Did we really spend as much as that
(b) Do you always fly first class
(c) Is it as long ago as that
(d) Is it really as late as that
(e) Is Venice really so many miles away

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

The underlined phrase "it seems to be working" means

(a) The machines in the gym are very modern.
(b) You are looking even fatter than the last time we met.
(c) You look much older than you did in 1974.
(d) You must have a very successful job now.
(e) Your exercise program has been successful.

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

(a) advise
(b) hope
(c) offer
(d) surprise
(e) take

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

(a) for all we know
(b) in the unlikely event
(c) it's about time
(d) time will tell
(e) to be honest

- 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.)

“Space exploration is a waste of money.”

[END OF TEST]

