

英 語



(問 題)

2015年度

〈2015 H27090111〉

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。

	万	千	百	十	一
(例) 3825番⇒		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。
9. 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.

Humanity. *Homo sapiens*. Mortals. More than 150 years after Darwin published *On the Origin of Species*, society continues to turn to biology to separate man from beast because humans like to believe they are special. But just how special are we really?

When scientists first began to examine human DNA in fine detail, many thought it would finally close the question of what makes us human: our uniqueness would be written in the four-letter code that constitutes our DNA. At the time, no one knew how many genes humans had, with some scientists estimating the number to be upward of 150,000 genes, reasoning that such a complex species would need more genes than simpler organisms.

As the data was published, it quickly became clear that (A) truth. Humans have only around 20,000 genes that code for proteins; one tiny species of roundworm, *C. elegans*, has 18,500. Furthermore, our genes aren't significantly different from those of our closest animal relatives. Today, it is a pop-science truism that around 98 percent of human DNA is shared with chimpanzees.

So if DNA is less a plan for building a human and more a book for life shared by many species, where does it leave the human quest for uniqueness? Tim Lewens, of Cambridge University, says what is really different about humans is that we have a large body of inherited culture as well. "Humans are a species in which large amounts of inheritance are driven by culture," he says. "Much of what we pass on to our offspring is not genetic, but linguistic and cultural. We act in this way because we're an extraordinarily collaborative species. So it's not just that I tell my kids some useful things; it's that communities in the species as a whole construct legal institutions, libraries, schools, hospitals, and things like that." Humans create complex social institutions, in part, because of high intelligence, and this is one of the factors now considered important in explaining the difference between humans and other species.

But is human intelligence really unique? Scientists studying animal intelligence and behavior are increasingly making the boundaries between us and other species less (B), as Nicky Clayton, also at Cambridge, explains. "Many of the things that were thought to be uniquely human are, but in degree, not in kind," she says. "And because some of the most convincing evidence comes not from our closest relatives—the chimpanzees and bonobos—but from birds, this suggests these abilities have evolved independently and more than once." (C) "That's probably the most convincing evidence of a theory of mind in an animal because it shows the ability to project social experiences, to put oneself into another's shoes, so to speak."

So what things can humans do that animals definitely can't? "The obvious ways humans differ are in language and culture. No other animal reads and writes," Clayton says. "So I can show that the birds can remember what happened, where, and how long ago. But does that mean, in thinking about that event, the bird reminisces and re-experiences it? Well, of course, I've got no idea because, in the (D) of language, how would you do standard tests to ask them about their experiences?"

Although species like apes and gorillas produce rhythmic streams of sound that might be regarded as simple forms of language, only in humans is this used in a complex, abstract language system, says Usha Goswami, a professor of cognitive developmental neuroscience. Goswami studies how children learn language to understand what goes wrong in language development. "You don't find in any other species the ability humans have to combine linguistic elements, where you get a section of sound-like syllables—for example, 'an-i-mal' or 'cat'—that shares no sensory features with animals or cats," she says. "You can also have reference for things that aren't in the here and now, and you can have abstract concepts like truth and beauty, the past and the future, and other possible worlds—something animals don't seem to have."

Goswami's research suggests some other reasons why human children are fundamentally different from animals. "My view would be that animals have a theory of mind that's limited to food," she says. "A baby will have a richer theory of mind because of all our communicative social tuning—there's a

shared social element of human communication. For example, if it's learning through copying someone else's actions, and the person starts copying back, it will notice that." She adds, in concluding, that "animals can do bits of the things babies do, but no one species does enough of them to come anywhere close to the human being."

That, it would seem, is the heart of the matter. Our genetic basis is not unique. Nor is our collaborative culture. Not even language and intelligence are the privilege of the human species alone. But humans have developed and combined all these characteristics to an extraordinary degree, a degree far beyond that witnessed in any other species. And that is what sets human beings apart and makes them truly unique.

Source: CAM 61, Michaelmas 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) could (c) from (d) further
(e) less (f) nothing (g) the
- 2 Choose the most suitable answer from those below to complete the following sentence.
Scientific research has revealed that
(a) age is a principal factor in determining the structure of DNA.
(b) examination of an animal's environment helps us to understand genetic structure.
(c) human DNA is very different from the DNA of any other animal.
(d) physical size and number of genes appear to be unrelated.
(e) scientists' predictions about the number of human genes were relatively accurate.
- 3 Choose the most suitable answer from those below to complete the following sentence.
The human species hands down a great deal of its culture to future generations
(a) as a result of having been on the planet for a long time.
(b) by producing as many offspring as possible.
(c) despite its inability to create diverse communities.
(d) in order to show that human beings are unique.
(e) through the establishment of social institutions.
- 4 Choose the most suitable answer from those below to fill in blank space (B).
(a) clear
(b) intelligent
(c) progressive
(d) relative
(e) vague
- 5 Choose the most suitable order of sentences from those below to fill in blank space (C).
(a) Back in 2001, Clayton and her team showed that jays, which typically hide food, would re-hide food if another jay had seen them hide it, something they never did when they had hidden food in private.
(b) "In other words, it takes a thief to know one," she says.
(c) One of Clayton's triumphs is demonstrating that a certain type of bird—the jay—has a theory of mind: it has the ability to understand the world from another jay's point of view.
(d) What is more, jays that re-hid food were birds that had themselves been thieves in the past.

- 6 Choose the most suitable answer from those below to fill in blank space (D).
- (a) ability
 - (b) absence
 - (c) basis
 - (d) behavior
 - (e) experience
- 7 Choose the most suitable answer from those below to complete the following sentence.
According to Goswami, a human baby's theory of mind is
- (a) concerned with food and not communication.
 - (b) focused on copying the actions of others.
 - (c) more complex than that of an animal as a result of communicative activity.
 - (d) not as well developed at the point of birth as that of a jay.
 - (e) the same, approximately, as that of apes that have been trained in the lab.

II Read this article and answer the questions below.

What began as a minor trash problem in space has recently developed into something very serious. Many experts now regard the problem of space junk as a real threat to the future use of space. Hundreds of thousands of pieces of space debris—including broken satellites, discarded rocket parts, and tools lost by astronauts—now crowd the space surrounding Earth.

A report released recently by the Space Security Index, an international research consortium, identified space debris as a primary issue. Such objects, it declared, could do serious damage to working spacecraft if they were to hit them, and might even pose a risk to people and property on the ground if they fall back to Earth and are large enough to survive reentering the atmosphere. Similar recognition of the trash threat in space emerged in the national space policy of the United States revealed by President Obama in June 2010. Such growing awareness of the space-debris problem builds on harsh warnings issued in past years by scientists and military commanders. It could also pave the way for U.S. agencies and others to better (A) the space surrounding Earth.

Consideration of space debris as a major threat may cause countries—including the United States—to take a more global view on the threat of space weapons, said Brian Weeden, a former U.S. Air Force analyst who now belongs to an organization dedicated to the sustainable use of space. “This is an important realization because, before that, most of the security focus was on threats from other countries with the ability to send weapons into space,” Weeden explained. “This is the first national policy recognition that threats can simply come from the space environment and nonhostile events.”

All those bits of garbage in space could eventually create a floating artificial barrier that endangers space flight for any nation, experts said. Even fictional space navigator Han Solo from *Star Wars* might prefer to risk turbolaser blasts from Imperial starships than to confront the danger of Earth’s growing cloud of space debris, where objects whizz by at up to 7.8 km per second.

The possibility of a damaging collision between spacecraft and orbital junk only continues to grow with more functional and nonfunctional hardware flying above Earth. Both the International Space Station and space-shuttle missions have been forced to take action to avoid space debris in the past. There are more than 21,000 objects larger than 10 cm in diameter being tracked by the U.S. Department of Defense (DOD). DOD estimates suggest there are more than 300,000 larger than 1 cm, not to mention several million smaller pieces.

“The shuttle was more likely to be wiped out by something you didn’t see than by something you were trying to avoid,” said Donald Kessler, a former NASA researcher. Since Kessler began studying the issue decades ago with a fellow researcher at NASA, the problem has become much worse. Their 1978 research described how the debris cloud might continue expanding on its own because of an ever-higher probability of collisions that build upon each past collision. That prediction, known as the Kessler Syndrome, may have already been realized. In one well-documented case, a U.S. communications satellite and an abandoned Soviet spacecraft were destroyed in an unintended head-on collision in 2009. That incident added more than 1,000 pieces of trackable debris to the mess, adding to the number of possible targets and therefore increasing the chances of future collisions.

The overall trackable amount of space debris grew by about 15.6 percent, according to the 2010 Space Security report. NASA and other U.S. agencies could use national space policy as a chance to aggressively pursue solutions, such as using spacecraft or other objects to take down a few select pieces of debris, experts said. “If we only bring down four objects per year, we can stabilize [the debris field] as long as we carefully select those most likely to contribute to debris,” Kessler told SPACE.com.

(B) More likely is a strictly voluntary consensus that would put pressure on countries with a space program to address these issues. The criticism of past space-weapons tests that have created space debris has already changed how countries plan their actions, said Joan Johnson-Freese, a space-policy analyst at the U.S. Naval War College.

“When the United States tested an antisatellite (ASAT) weapon in 1985 by destroying its Solwind satellite, and China tested its ASAT in 2007, neither broke any ‘rules,’” she states. “But each created a substantial amount of space debris potentially dangerous to other spacecraft.” Both countries have since changed their policies and said future tests will be aimed only at destroying targets that won’t leave lingering debris. “In terms of space debris, it is simply not in U.S. interests to pursue paths that encourage actions that result in debris creation.”

Source: <http://www.space.com/10537-space-junk-rivals-weapons-major-threat.html>

- 1 Choose the most suitable answer from those below to complete the following sentence.
A recent report suggests that
- (a) even the smallest amount of space debris would damage property if it fell back to Earth.
 - (b) people need not take the issue of space debris too seriously at the present time.
 - (c) space debris can result from large pieces of junk reentering the atmosphere.
 - (d) space junk is a considerable danger to vehicles working in space.
 - (e) the president of the United States should start to consider the issue of space debris.
- 2 Use the six words below to fill in blank space (A) in the best way. Indicate your choices for the second, fourth, and sixth positions.
- (a) clean (b) figure (c) how (d) out
 - (e) to (f) up
- 3 Choose the most suitable answer from those below to complete the following sentence.
Weeden suggests that the new attitude toward space debris is important because
- (a) it changes the idea that danger in space comes mostly from the actions of hostile countries.
 - (b) it will discourage countries from sending weapons into space.
 - (c) it will help the U.S. Air Force to become more dedicated to the sustainable use of space.
 - (d) space debris has been regarded until now mostly as a subject of science-fiction movies.
 - (e) the barrier created by space debris interferes with the formation of clouds.
- 4 Choose the most suitable answer from those below to complete the following sentence.
The increasingly serious nature of the threat from space debris is shown by the fact that
- (a) a shuttle was badly damaged on a recent space mission.
 - (b) collisions between spacecraft and debris in space have become frequent.
 - (c) DOD estimates no longer include objects that are larger than 1 cm.
 - (d) millions of pieces of debris are now thought to be flying round Earth.
 - (e) turbolaser blasts have been ineffective in destroying space junk.
- 5 Choose the most suitable answer from those below to complete the following sentence.
The Kessler Syndrome refers to the idea that
- (a) collisions in space create debris whose existence increases the chance of future collisions.
 - (b) it is easier to be wiped out by unseen pieces of debris than by visible pieces of debris.
 - (c) researchers at NASA need to study more carefully how space debris is formed.
 - (d) using communications satellites is a suitable method of tracking space debris.
 - (e) vehicles sent into space by countries such as the U.S. are the main problem.
- 6 Choose the most suitable answer from those below to complete the following sentence.
One suggested solution to the space debris problem is to
- (a) allow the amount of debris to grow by no more than about 15 percent per year.
 - (b) make NASA and other American agencies cooperate more closely.
 - (c) stop sending so many vehicles into space until some of the debris disappears.
 - (d) target just a few pieces of debris every year and then get rid of them.
 - (e) track the amount of space debris more carefully with better instruments.
- 7 Choose the most suitable order of sentences from those below to fill in blank space (B).
- (a) An international initiative along these lines would set the playing field for what is to come, which would be helpful, though not the solution itself.
 - (b) Based on the work of Kessler and other researchers, policymakers in the United States have finally begun to take action.
 - (c) Even so, the United States and other countries could then begin discussing informal codes of conduct about how to minimize space debris from new missions and deal with old space debris.
 - (d) However, legally binding agreements remain politically unlikely, at least for the time being.

III Read this article and answer the questions below.

Many of today's respected thinkers argue that our efforts to fight climate change and other environmental perils will all fail unless "we do something" about population growth. One recently declared that, "in the last 200 years, population growth has been exponential. The world population doubles every forty years."

(A) For a start, there is no exponential growth. In fact, population growth is slowing. For more than three decades now, the average number of babies being born to women in most of the world has been in decline. Globally, women today have half as many babies as their mothers did, mostly out of choice. They are doing it largely for their own good and the good of their families, not because it helps the planet.

Here are the numbers. Forty years ago, the average woman had between five and six kids. Now she has 2.6. This is getting close to the replacement level, which, allowing for girls who don't make it to adulthood, is around 2.3. Half the world already has a fertility rate below the long-term replacement level. That includes all of Europe, much of the Caribbean, a number of Asian countries, Australia, Canada, Algeria, and Tunisia.

So why is this happening? Demographers used to say that women only started having fewer children when they got educated and the economy got rich, as in Europe. But look at the women of Bangladesh, one of the world's poorest nations, where girls are among the least educated in the world and mostly marry in their mid-teens. They have just three children now, less (B) had. India is even lower at 2.8. Look also at the women of Brazil. In this hotbed of Catholicism, women have two children on average—and this is falling. Nothing the priests say can stop it.

Women are doing this because, for the first time in history, they can. Better healthcare and sanitation mean that most babies live to grow up. It is no longer necessary to have five or six children to ensure the next generation—so they don't.

There are holdouts, of course. (C)

The main point is that rich or poor, socialist or capitalist, Muslim or Catholic, secular or religious, with or without tough government birth-control policies in place, most countries tell the same tale of a reproductive revolution.

This does not mean that population growth has ceased. The number of people in the world is still rising by 70 million a year. This is because there is a time lag: the huge numbers of young women born during the earlier baby boom may only have had two children each. This is still a lot of children. But within a generation, the world's population will almost certainly be stable. Is this good news for the environment and for the planet's resources? Clearly, having fewer people will do less damage to the planet. But it won't on its own do a lot to solve the world's environmental problems, because the second myth about population growth is that it is the driving force behind our wrecking of the planet.

In fact, rising consumption today far outstrips the rising headcount as a threat to the planet. And most of the extra consumption has been in rich countries that have long since given up adding substantial numbers to their population, while most of the remaining population growth is in countries with a very small impact on the planet. By almost any measure you choose, a small proportion of the world's people take the majority of the world's resources and produce the majority of its pollution.

Let's look at carbon-dioxide emissions: the biggest current concern relates to climate change. The world's richest half billion people—that's about 7 percent of the global population—are responsible for (D) of the world's carbon-dioxide emissions. Conversely, the poorest half of the population are responsible for just 7 percent of emissions. Virtually all of the extra 2 billion or so people expected on this planet in the coming 30 or 40 years will be in this poor half of the world. Their impact on carbon emissions will be minor.

In sum, it is overconsumption, not overpopulation, that matters. We must not blame the world's poor for the environmental damage caused overwhelmingly by us, the rich. The truth is that the population

bomb is being defused round the world but the consumption bomb is still primed and waiting. It is becoming ever more dangerous.

Source: <http://www.prospectmagazine.co.uk/magazine/the-overpopulation-myth/>

- 1 Choose the most suitable answer from those below to fill in blank space (A).
 - (a) Actually, it's worse than that.
 - (b) But this is nonsense.
 - (c) However, no one really knows.
 - (d) There is no reason to doubt that this is true.
 - (e) This has been the case for many generations.

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

Women seem to be having fewer babies these days

 - (a) as a direct consequence of lack of education.
 - (b) as a result of marrying too young.
 - (c) mainly as a personal decision.
 - (d) owing to advice from their mothers.
 - (e) partly through a desire to help the planet.

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

(a) half	(b) mothers	(c) number	(d) than
(e) the	(f) their		

- 4 Choose the most suitable order of sentences from those below to fill in blank space (C).
 - (a) But even the Middle East is changing.
 - (b) In parts of rural Africa, women still have five or more children, and in remote villages in parts of the Middle East, women still have six babies on average.
 - (c) In the past 20 years, women in that country have gone from having eight children to less than two—1.7 in fact—whatever the religious leaders say.
 - (d) Take Iran.

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

The writer suggests that the population of the world

 - (a) can best be predicted by economic trends.
 - (b) is largely determined by religious influences.
 - (c) must be reduced for environmental reasons.
 - (d) should be strictly controlled by government action.
 - (e) will probably stop growing within 20 or 30 years.

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

The countries where the population seems to be growing the fastest

 - (a) are not making enough effort to become richer and better educated.
 - (b) consume most of the planet's limited supplies of natural wealth.
 - (c) do not use up a significant proportion of the world's resources.
 - (d) have been responsible for too much pollution for too long a time.
 - (e) will be the biggest threat to the planet in the foreseeable future.

- 7 Choose the most suitable answer from those below to complete blank space (D).
- (a) 7 percent
 - (b) 14 percent
 - (c) a quarter
 - (d) half
 - (e) less
- 8 Choose the most suitable answer from those below to complete the following sentence.
- The main point of the writer's argument is that
- (a) environmental problems are more important than population growth.
 - (b) having fewer children is primarily the responsibility of individuals.
 - (c) increases in population and overconsumption of goods are the main threats facing us.
 - (d) the wealthier members of the global community must stop consuming so much.
 - (e) women around the world are getting better educated as time goes by.

IV Read this dialogue and answer the questions below.

Harry: Is that the horoscope you're reading? You don't really believe the stars can control your fate, do you?

Ron: Oh, of course not. Still, you can't deny that the horoscope has (A).

Harry: Really? And what do the stars predict for you today?

Ron: Well, I'm a Libra, and today's horoscope says that I have to plan carefully if I want to avoid becoming confused.

Harry: (B) Are you in some special danger of getting confused?

Ron: Well, since yesterday, I've already had to cancel one appointment and add one with someone else. If I don't remember which one is which, it could lead to some serious embarrassment.

Harry: There's an easy solution for that—just write it down on your calendar.

Ron: That's the whole point. We Libras simply (C) down on a calendar. Too much room for making mistakes. It just goes to show you that the horoscope can be right after all.

Harry: I'm afraid it's going to take more than that to convince me.

Ron: (D) By the way, Harry, what's your blood type?

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

(a) a	(b) getting	(c) habit	(d) of
(e) right	(f) star	(g) things	(h) to

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

(a) Absolutely right!
(b) I can't help myself!
(c) It's not my problem!
(d) Someone has to do it!
(e) That could apply to anyone!

- 3 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) be	(b) can't	(c) don't	(d) everything
(e) to	(f) trusted	(g) write	

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

(a) Consider it done.
(b) Feel free to doubt it.
(c) I wouldn't if I were you.
(d) Two heads are better than one.
(e) You can always try again.

- 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.)

“The voting age in Japan should be lowered to 18.”

[END OF TEST]

