

令和8（2026）年度入学試験問題（前期）

英 語

注 意

1. 合図があるまで表紙をあけないこと。
2. 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れ等に気づいた場合は、手を高く上げて監督者に知らせること。
3. 解答は解答用紙の枠内に記入すること。
4. 枠外に記入した場合、および解答用紙に解答以外のことを書いた場合、その答案は無効とする。
5. 受験票は机に出しておくこと。

I 以下の英文を読み、問いに答えよ。

It's a common notion that overuse of smartphones, tablets, laptops and other digital devices is rotting people's minds.

But the opposite appears to be true – regular use of digital technology seems to protect the brain against decline and dementia, at least among those present at the dawn of the tech revolution.

(1)Everyday use of digital devices appears to reduce seniors' risk of cognitive decline by 58%, similar to the protection gained from lower blood pressure, exercise and brain training, according to findings published April 14 in the journal *Nature Human Behavior*.

(2)These findings contradict concerns that the generation that swapped typewriters for personal computers would be subject to "digital dementia," with a lifetime of technology use making brain decline more likely, researchers said.

"There was no credible evidence ... for widespread digital 'brain drain' or 'digital dementia' as a result of general, natural uses of digital technology," concludes the evidence review led by Jared Benge, a neuropsychologist at the University of Texas at Austin's Comprehensive Memory Center.

For the review, researchers pooled data from 57 prior studies involving more than 411,000 people. These people had an average age of 69 when research began.

"The first generation who engaged with digital technologies has reached the age where risks of dementia emerge," making them "(3)digital pioneers," researchers wrote.

Someone born in 1945 would have paid bills with a check or cash, used encyclopedias and library card catalogs to research information, relied on a paper fold-out map to navigate new areas, and waited days to exchange hand-written letters sent through the U.S. Post Office, researchers said.

"(4)This same individual is now approaching their 80's and lives (ア) a world where shopping occurs on the internet with credit cards, new knowledge is acquired (イ) typing a question into a search engine, prospective memory* is supported by digital calendars with automatic reminders, navigation is facilitated by GPS devices that are installed in most cars or phones, and text- or video-based communications can occur instantaneously with people across the world," researchers wrote.

Analysis of the pooled studies found that "for people in midlife and beyond, greater use (ウ) everyday digital technologies was associated with reduced odds for cognitive decline," (エ) people who regularly used devices having a 58% lower risk of brain impairment or dementia, researchers found.

By comparison, lowering blood pressure can reduce dementia risk by 13%, regular physical activity by 35%, higher education by up to 47%, and brain training and other cognitively stimulating leisure activities by 31%, researchers wrote.

“(5)Technology engagement was associated with reduced odds of cognitive decline in middle-aged and older adults,” the researchers concluded.

Further, this association between digital technology and brain health could not be explained by people’s background, wealth, health or other lifestyle factors, researchers added.

They pointed to (6)three possible reasons why technology might be helping people’s brains age more gracefully.

First, digital devices might promote more active use of people’s thinking and problem-solving skills, and not just through online brain training and puzzles.

People who use devices must cope with evolving interfaces, troubleshoot hardware and software issues, and actively filter out distractions like pop-up ads — “additional layers of cognitive complexity” that constantly engage people’s brains without them even realizing it, researchers said.

Second, digital technology facilitates better social connectedness, which has been shown to protect against dementia. People can stay in close touch with others through e-mail, texts and video chats, and use the technology to more easily arrange get-togethers.

And third, devices might form a “digital scaffold” that helps support people even as their brains begin to experience age-related decline. Reminders to pay bills or take medications help people keep up with daily demands, allowing them to remain independent longer.

However, researchers (オ) that “there is no simple answer to whether technology is ‘always good’ or ‘always bad’ for the aging brain.”

For example, people’s brain health might suffer if they (カ) into couch potatoes** from too much screen time, and use of social media might expose seniors to misinformation, researchers said.

And these findings should only be applied to people (キ) at the start of the digital revolution, researchers added.

“The current review (ク) on ‘digital pioneers’, that is, the group of middle-aged and older adults who were first exposed to computers, internet and smartphones during adulthood,” researchers wrote.

“It is unknown whether the current findings will (ケ) in future decades for people who were initially exposed to digital technologies during childhood or as the types of general digital technology exposure change, ” they added.

(出典 : Dennis Thompson, “Everyday digital tech is protecting seniors’ brain health, study says,” *HealthDay*, April 15, 2025. 一部変更あり)

*prospective memory: a form of memory that involves remembering to perform a planned action

**couch potatoes: people who spend a lot of time sitting and watching television

1. 下線部(1)を日本語に訳せ。

2. 次の文は下線部(2)を言い換えたものである。空欄①～④に入る最も適切な語(句)を選択肢の中から選び記号で答えよ。ただし選択肢は一度しか使えない。

These results go (①) the worry that people who started using (②) instead of (③) might have more memory problems because of using technology for (④) years.

あ. a few	い. against	う. computers	え. for	お. handwriting
か. many	き. millions of	く. typewriters		

3. 下線部(3)の digital pioneers は何を指すかを 20 字以内の日本語で説明せよ (句読点を含む)。

4. 下線部(4)の This same individual が指す内容として相応しくないものを 2 つ選び記号で答えよ。

- A. A person who has never experienced life without the internet
- B. A person who used to write letters by hand
- C. A person who was accustomed to using cash or checks to pay bills
- D. A person who has used smartphones and social media since childhood
- E. A person who once relied on library card catalogs to find information

5. 本文中の空欄ア～エに入る最も適切な語を選択肢の中から選び記号で答えよ。ただし選択肢は一度しか使えない。

あ. as	い. by	う. in	え. of	お. with
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6. 次の文は下線部(5)を言い換えたものである。空欄①～④に入る最も適切な語を選択肢の中から選び記号で答えよ。ただし選択肢は一度しか使えない。

Frequent (①) of technology was linked (②) a lower chance of memory or thinking (③) among middle-aged and older (④).

あ. problems	い. from	う. health	え. juveniles	お. to
か. misunderstanding	き. people	く. against	け. marriage	こ. use

7. 下線部(6)の three possible reasons について、本文の内容と合うように以下の空欄①～③に入る最も適切なものを下記から選び記号で答えよ。

First, [①]. Second, [②]. Third, [③].

- A. digital tools can support daily life by giving reminders, which helps older adults stay independent even as their thinking skills decline
- B. online entertainment makes people less willing to engage in social interaction
- C. technology helps people maintain relationships with others, which is known to protect against dementia
- D. using digital devices stimulates mental effort by requiring people to solve problems and adapt to new tools and distractions
- E. using technology improves eyesight and reaction time in older adults

8. 本文中の空欄 (オ) ～ (ケ) に入る最も適切な語を下記の選択肢から選び記号で答えよ。ただし選択肢は一度しか使えない。

あ. expose	い. exposure	う. focus	え. focused	お. focal
か. focusing	き. held	く. hold	け. holding	こ. noted
さ. noting	し. present	す. presentation	せ. presenting	そ. turn
た. turning				

II Read the passage and answer the questions that follow.

A new study finds that the first humans to live in North America depended heavily on mammoths and other large animals for food.

The finding is based on examinations of the diet of a woman who lived about 13,000 years ago during the last Ice Age. She belonged to a culture called the Clovis. They were among the first Native Americans to arrive on the continent.

The woman was still breast-feeding her 18-month-old son when he died. The boy's remains were discovered back in 1968 in an ancient burial ground in the western U.S. state of Montana. Scientists examined ⁽⁷⁾his bones to learn more about his mother's ⁽¹⁾_____.

They found that the woman ate mostly meat from mammoths and other very large animals. ⁽²⁾The finding supports scientific theories that Clovis people specialized in hunting large animals instead of seeking plants or small animals to eat.

At the time the Clovis people lived, large animals like mammoths lived in areas covering the Americas, as well as parts of northern Asia. The researchers noted that mammoths traveled very long distances during this period. This made ⁽³⁾them a target for migrating humans seeking protein-rich foods to eat.

The team examined isotope data collected from the boy's bones to estimate the Clovis woman's dietary intake. An isotope is a kind of atom that has a different atomic weight than similar atoms, but the same chemical structure. The isotope experiments centered on the elements carbon and nitrogen.

Mat Wooller is a professor and director of the Alaska Stable Isotope center at the University of Alaska Fairbanks. He was a co-writer of the study describing the research in the publication *Science Advances*.

Wooller told Reuters news agency that isotope examinations can provide "⁽⁴⁾a chemical fingerprint" of parts of an ancient human's diet. "We are all made of elements, like carbon and nitrogen, and so is our food," ⁽¹⁾he said.

James Chatters is a professor of Earth, Environment and Society at Canada's McMaster University. He helped lead the research. Chatters said in a statement that centering on mammoths "helps explain how Clovis people could spread throughout North America and into South America in just a few hundred years."

The scientists estimated the woman mostly ate meat from a group of animals called ⁽⁵⁾megafauna, the largest creatures that existed at the time. The study showed megafauna made up about 96 percent of her diet, with mammoth accounting for about 40 percent of the total.

Chatters said one mammoth could support "a dependent community of children, care-giving women, and less mobile elders for days or even weeks while the hunters sought their next kill." Mammoths stood to about four meters tall at the shoulder and weighed as much as 11 tons.

Chatters said the Clovis people were known to be highly skilled hunters with a 10,000-year history of hunting megafauna over wide areas of territory. ⁽⁶⁾He added that the great dependence of the Clovis on megafauna likely led to the pressures that later caused the extinction of large ice age animals.

Chatters noted the latest finding supports past studies that provided “indirect evidence” that Clovis people mainly depended on mammoths and other large animals for food. This evidence included examinations of different artifacts – such as stone tools or the ancient remains of large animals, ⁽⁼⁾he said.

Ben Potter was also a co-writer of the study. He is an archeologist at the University of Alaska Fairbanks. Potter told Reuters, “These results also help us understand megafauna extinctions at the end of the last Ice Age.” ⁽⁼⁾He added the findings suggest that humans may have played a more important part in the extinctions than is sometimes thought.

(Adapted from Bryan Lynn, “Study: Ancient Americans depended heavily on mammoth for food,” *VOA Learning English*, December 12, 2024.)

1. Choose the best option to fill in the blank (1).
A. age B. cause of death C. diet D. genetic background

2. Choose the statement that best matches the content of the underlined sentence (2).
A. Researchers learned that Clovis people were forced to eat small animals and plants because large animals were hard to catch.
B. Researchers were surprised to find that Clovis people sometimes ate both plants and animals.
C. Scientists have long believed that Clovis people preferred large animals for food, and this discovery confirms that idea.
D. The new discovery suggests that Clovis people were vegetarians who rarely hunted animals.

3. Choose the option that best explains what the underlined part ⁽³⁾them refers to.
A. areas covering the Americas and parts of northern Asia
B. mammoths
C. the Clovis people
D. the researchers

4. Choose the option that best explains the underlined part “⁽⁴⁾chemical fingerprint”.
A. It eliminates nitrogen.
B. It gives clues about a person’s food intake.
C. It matches people with their relatives.
D. It reveals the genetic background of a person.

5. Choose the correct statement about ⁽⁵⁾megafauna.
- A. It referred to all large animals a few hundred years ago.
 - B. Researchers found new types of megafauna in this study.
 - C. Megafauna was hardly a source of protein for humans.
 - D. Mammoths are considered to be one type of megafauna.
6. For each of the underlined parts (ア)～(オ) in the passage, choose the person it refers to and answer using the corresponding letter. (Options may be used more than once.)
- A. an archeologist in Alaska
 - B. a director of the Alaska Stable Isotope center
 - C. an elder man in Montana
 - D. a young Clovis boy
 - E. a professor at McMaster University in Canada
7. Regarding the people involved in this study, choose the most appropriate word for each blank (①–⑤) from the options below, and answer using the corresponding character. (Each option can be used only once.)

This study involved scholars such as Mat Wooller, who (①) insights into ancient diets; James Chatters, who contributed from environmental (②); and Ben Potter, who suggested that humans might have (③) megafauna extinctions to a greater extent than is typically assumed. Together, their interdisciplinary cooperation helped (④) how Clovis people (⑤) heavily on large animals.

あ. ate	い. bones	う. provided	え. influenced	お. identified
か. perspectives	き. relied	く. reveal		

III 下線部を英訳せよ。

(1) かつて、禅 (Zen) の修行は大いなる自然との一体化を目指すものであった。 (2) そのため、自然のエッセンスを凝縮して庭園を造ることは、禅の修行の一つとして認識されていた。 (3) 禅の考え方に影響を受けた庭園の特徴の一つは、砂で波のイメージを造るといったような、自然の景観を巧みに表現することである。

(このページは下書きに使用する)