2025年度

# 英　　語

2025年2月13日実施

| 受験番号 | | 氏 名 | |
|---|---|---|---|

## 【注　意　事　項】

1. 試験監督による解答始めの指示があるまで，この問題冊子の中を見てはいけません。
2. 試験時間は60分です。
3. この問題冊子は１ページから11ページまであります。
4. 解答は解答用紙（マークシート）の所定欄に記入しなさい。
5. 解答は所定欄に濃くはっきりとマークしなさい。その際，ボールペン・サインペン・万年筆等は使用してはならない。その他マークの仕方に関しては，解答用紙（マークシート）の注意事項をよく読むこと。
6. 試験監督の指示により，解答用紙（マークシート）に**氏名**（**フリガナ**）および**志望学部・志望学科・受験番号**を記入し，さらに**受験番号**をマークしなさい。
7. 試験監督の指示により，問題冊子にも**受験番号**および**氏名**を記入しなさい。
8. 解答用紙（マークシート）は折り曲げたり，メモやチェック等で汚したりしないように注意しなさい。
9. 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づいた場合は，手を高く挙げて試験監督に知らせなさい。
10. 試験終了後，問題冊子と解答用紙（マークシート）はともに机上に置いておくこと。持ち帰ってはいけません。

Ⅰ　次の英文を読み，下記の設問に答えなさい。

As you read (6) these lines, the highly sophisticated biological 'machine,' that is your brain, is at work. The human brain is made (　1　) approximately 86 billion neurons and controls not only our bodily functions from vision to movement but also provides consciousness and understanding.

Despite its central importance, the brain's origins have not yet been (　2　). The first animal brains appeared hundreds of millions of years ago. Today, only the most primitive animal species, such as [　12　], do not have brains. (ア) Paradoxically, these species may hold the key to unlock the mystery of how neurons and brains first evolved.

Individual neurons in a brain communicate (　3　) synapses. These connections between cells (7) lie at the heart of brain function and are regulated by a number of different genes. Certain sponges*1 do not have these synapses, but their genome, the set of genes, still helps cells communicate with one another. Scientists at the European Molecular Biology Laboratory (EMBL) asked the question (イ) why this might be the case.

"We know that these synaptic genes are involved in brain-cell function in (8) higher animals. Finding them in primitive species like sponges (9) begs for the question: if these animals don't have brains, what is the role of these genes?" explained Detlev Arendt, EMBL Group Leader. "(ウ) As simple as that sounds, answering this question was beyond our technological abilities so far."

To study the role of these synaptic genes in sponges, Arendt's lab established [　13　] in *Spongilla lacustris*, a freshwater sponge. Using these techniques, the scientists captured individual cells from several sponges and then profiled each cell's genetic activity.

"We showed that certain cells in the sponge's digestive chambers activate the synaptic genes. So even in (10) a primitive animal lacking synapses, the synaptic genes are active in specific parts of its body," said Jacob Musser, Research Scientist in the Arendt group and lead author on the study.

Sponges use their digestive chambers to (11) filter out food from the water and interact with tiny organisms in their surroundings. To understand (　4　), the Arendt group worked with other EMBL teams as well as collaborators worldwide. Throughout the collaborative work, the researchers developed [　14　]. "By combining electron microscopy with X-ray imaging, we were able to visualise the stunning behaviour of these cells," Dr. Schwab, another researcher at EMBL, explained.

The scientists captured [20] 3D images of cells crawling throughout the digestive chamber to clear out bacteria and extending long arms to reach the feeding parts of certain digestive cells. This behaviour creates a contact point for cell-to-cell communication, (　5　) how neurons connect in our brains. “Our results point to the cells regulating feeding and managing bacteria as possible ancestors of the first animal brains,” Dr. Musser said. “(エ) Truly food for thought!”

注：*1sponge「海綿動物」

**問1**　本文中の空欄（1）～（5）に入る最も適切なものを，それぞれ①～④の中から一つずつ選びなさい。

（1）① from to　② in and　③ off with　④ up of

（2）① unrevealed　② unrevealing　③ uncovered　④ uncovering

（3）① and　② during　③ out　④ through

（4）① what do the cells with synaptic genes do
② what the cells with synaptic genes do
③ with what the cells do synaptic genes
④ with what the synaptic genes do the cells

（5）① likely　② likely to　③ similar to　④ similarly

**問2**　本文中の下線部（6）～（11）に最も意味が近いものを，それぞれ①～④の中から一つずつ選びなさい。

（6）these lines

① the lines and shapes the machine draws
② the lines and wrinkles on human brains
③ the neurons in human brains
④ the sentences written in this article

（7）lie at the heart of brain function

① give instructions to multiple organs to move
② locate themselves on top of the brain and the heart
③ play a fundamental role in brain operation
④ position themselves in the central part of the brain



出典追記：More than a gut reaction, EMBL on November 5, 2021 by Annika Grandison
Photo Credit: Jacob Musser, Giulia Mizzon, Constantin Pape, Nicole Schieber/EMBL

(8) higher animals

① creatures created by more advanced technologies
② creatures living above the water
③ creatures that are more endangered
④ creatures with more complex structures

(9) begs for

① answers
② analyses
③ demands
④ explains

(10) a primitive animal lacking synapses

① a human that does not have synapses
② a human that fortunately has synapses
③ a simple animal that does not have synapses
④ a simple animal that fortunately has synapses

(11) filter out

① dry
② extract
③ flush
④ soften

**問3** 本文中の[12]～[14]に入る表現として最も適切なものを，それぞれ①～⑤の中から一つずつ選びなさい。ただし，各選択肢は一度しか使えません。

(12)～(14)

① communication tools for higher animals
② new imaging approaches
③ primates like monkeys and gorillas
④ aquatic sponges, ones living underwater
⑤ technologies to investigate liquid movement and gene functions

**問 4**　本文の内容について，(15) ～ (19) の各問いの答えとして最も適切なものを，それぞれ①～④の中から一つずつ選びなさい。

(15) Which of the following best describes the meaning of the underlined part, (ア)Paradoxically, these species may hold the key to unlock the mystery of how neurons and brains first evolved?

① Despite expectations, these animals can lead us to the brain mystery of human beings.
② Ironically, understanding brainless organisms may help us understand the origins of brains.
③ Regardless of our knowledge, the most primitive animals turn out to have brains like human beings do.
④ Surprisingly, brains in primitive animals may solve the mystery of human brains.

(16) What does the passage's underlined part (イ)why this might be the case mean?

① why cells in some sponges can communicate with one another without synapses
② why certain sponges do not have synapses for communication with one another
③ why sponges are primitive enough not to have neurons in some instances
④ why synaptic genes are included in animals' brain functions

(17) What did Detlev Arendt mean by "(ウ)As simple as that sounds, answering this question was beyond our technological abilities so far"?

① Because the issue was small, we never had the equipment to examine it.
② Examining primitive animals was easy due to our advanced technology.
③ Finding the answers to how simple the genes are was technologically impossible, and still is.
④ While seemingly easy, we did not have the techniques to answer the question back then.

(18) Which of the following best describes what Dr. Musser means by "(エ)Truly food for thought"?

① He has more evidence to prove his theory.
② More discoveries are coming on the way.
③ The discovery gives him much more to think about.
④ The discovery is an amazing innovation.

(19) Which of the following is most likely the title of the passage?

① Analyse This: Sponge's Synapses Can Last Thousands of Years

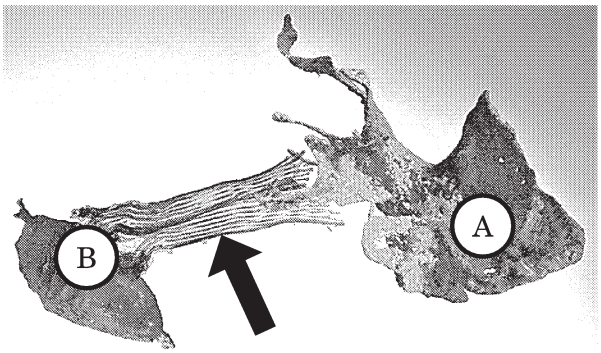
② Brain to Brain: Brains Signal to Each Other Using Computers

③ Grand Challenge: How the Human Brain Works and Produces Mental Activity

④ More Than a Gut Reaction: What Sponges Can Tell Us About the Evolution of the Brain

**問 5** 次の説明文と図は，本文中の下線部 [20] 3D images of cells を補足説明したものです。図の矢印の部分を指すものとして最も適切な語を ① ～ ④ の中から一つ選び，空欄 (20) に入れなさい。

The sponge cell Ⓐ stretches out (　20　) that enwrap the feeding device of a sponge digestive cell Ⓑ to create a link for communication.




(20) ① arms　② bacteria　③ chambers　④ neurons

Ⅱ　次の研究概要を読み，下記の設問に答えなさい。

Language is one of the most important characteristics of our species, but its function has been debated for centuries. Here, we bring recent evidence from neuroscience and related fields to argue that in modern humans, language is a tool for communication, contrary to a widely accepted view that we use language for thinking.

We begin by (　21　) that supports linguistic ability in humans. Then, we review (　22　) between language and thought, and discuss (　23　) that it is most effective when used for communication. We conclude that although (　24　) human culture, language does not appear to be (　25　) including symbolic thought.

Instead, language is (　26　); language likely co-evolved with our thinking and reasoning abilities and only reflects, rather than serves as the source of, the signature sophistication of the human mind.

**問 1**　本文中の空欄(21)～(26)に入る表現として最も適切なものを，それぞれ①～⑥の中から一つずつ選びなさい。ただし，各選択肢は一度しか使えません。

(21)～(26)

① several characteristics of language that suggest
② a powerful tool for exchanging cultural knowledge
③ a necessary requirement for complex thought
④ introducing the brain network
⑤ language has revolutionized
⑥ evidence for a clear separation

**問 2**　この研究概要の著者の主張として最も適切なものを，①～④の中から一つ選びなさい。

(27)　① As previous studies showed, neurological data suggests that languages are mainly used to enhance thinking ability for communication.
② Despite the long-lasting debate, brain function data suggests that languages helped humans develop their communication ability, and are not the origin of sophisticated thinking.
③ Linguistic knowledge defines what the human mind is, as the neurological data indicated in the study.
④ A consensus about what languages mean for humans has been established for centuries.



出典追記：Language is primarily a tool for communication rather than thought, Nature on June 19, 2024 by Evelina Fedorenko, Steven T. Piantadosi and Edward A. F. Gibson

Ⅲ　次のイギリスのトークショーの文字起こしを読み，下記の設問に答えなさい。

**(In a studio in the UK)**

Josh: The big story revolves around the swimmer Ellie Robinson in the S6 50-meter butterfly, in which she competed with others with limited mobility in their limbs or trunks. She came in fifth at the Tokyo Paralympics, but her post-race interview shined a light on her battle with Perthes Disease, causing her hip to collapse and rebuild. Ellie shared her experience and what it means to live with a time-limited hip.

**(A video clip of the post-race interview)**

Ellie: (38)I ran out of time this year with my hip. I thought I'd be upset, but I'm still in the top five. People told me it's okay to stop because I was at a low point, seeing a psychiatrist, on medication — it's been one of my hardest years. But I didn't want to finish like that. Even without a medal, I ended on my terms. I'm proud because I've been in pain all year — (39)this is a story of triumph, not defeat.

**(In the studio in the UK)**

Josh: It's easy to forget the struggles athletes like Ellie face. It's not just about medals — it's about pushing to the limit. That's what's inspiring.

Alex: Watching Ellie was emotional. [ A ] It's mentally and physically tough. My disability causes a symptom called *talipes* as well, in which my feet turn in and under at a difficult angle to walk, and her story made me reflect on not giving up. It's moments like this that transcend sport, and I'm so proud she's representing disabled people.

Josh: We're lucky to have Ellie with us now, live from Tokyo! (　28　)

Ellie: (　29　) My teammates left me nice messages, and though I'm still in pain, I'm just happy I got there. Watching your comments made me cry again!

Josh: It seemed like you really wanted to share your story in that interview.

Ellie: (　30　) My doctor said I shouldn't have competed in Rio, but I did. I always manage to overcome challenges. [ B ]

Josh: One of the audience asked on SNS if we should throw you a birthday party tonight! Was it your birthday today?

Ellie: It was August 30th, which was yesterday for me in Japan. But yes, for you guys, it's still my birthday!

Josh: Well, we've got birthday hats, a big board with Josh and Alex, and a poll for everyone to send you their wishes! We're so proud of you. (　31　)

Ellie: Sure!

Josh: We've loved you from the start. No matter what happens, you'll always be our favorite fighter. Blow out the candles!

[Audience applause, watching Ellie on-screen blow candles on a birthday cake.]

Josh: (　32　) These words, by the way, are trending number one on Twitter. We are all celebrating your birthday from England!

Ellie: Oh my god, I always cry when I talk to you guys!

Josh: (　33　) Your mum posted on SNS about how you've been a fighter since birth. We love you and are so proud. (　34　)

Ellie: Thank you! I'm overwhelmed and lost for words!

**問 1**　会話中の空欄 (28) ～ (34) に入るせりふとして最も適切なものを，① ～ ⑦ の中から一つずつ選びなさい。ただし，各選択肢は一度しか使えません。

(28) ～ (34)

① Aside from being really tired, I'm okay!
② Can I give you a birthday speech?
③ Happy Birthday, Ellie Robinson!
④ How are you doing, Ellie?
⑤ See you soon!
⑥ Yes, last November, I noticed the pain wasn't going away.
⑦ You deserve it!

**問 2**　会話の内容について，各問いの答えとして最も適切なものを，それぞれ ① ～ ④ の中から一つずつ選びなさい。

(35) Who most likely is Josh?

① A caster reporting from Japan
② A guest on the TV show
③ A TV host
④ An audience member

(36) Who most likely is Ellie?

① A TV producer
② A TV host
③ An anchor
④ An athlete



出典追記：Paralympian Ellie Robinson's Emotional Interview | The Last Leg of Tokyo 2020, Channel 4 on September 6, 2021

(37) Based on the conversation, what can be known about what Alex and Ellie have in common?

① They both have physical challenges.
② They are both athletes.
③ They are both in England.
④ They both competed in Rio.

(38) What does Ellie mean by "(38) I ran out of time this year with my hip"?

① Her medical condition worsened this year, and she could not give her best performance.
② Her mental condition was not good enough to compete at a world championship.
③ She did not have to compete any more as she had already won a gold medal in the last Paralympics at Rio de Janeiro.
④ She did not swim last year due to her hip problem and could not participate in the Tokyo Paralympics.

(39) What does Ellie mean by "(39) this is a story of triumph, not defeat"?

① Although her physical problems stopped her from swimming, she focuses on the positive, which is having her family and friends who care for her.
② Her mental toughness defeated her physical and mental problems, so she no longer has her medical problems.
③ She lost the race due to her physical and mental problems, but she will keep swimming until she wins.
④ Winning no medals may look like she lost the race, but coming in fifth place by overcoming all the difficulty is the win for her.

(40) What date is it in Japan, when Alex, Josh, and Ellie are having the conversation?

① August 29th
② August 30th
③ August 31st
④ Unknown

**問３**　会話中の空欄［　A　］と［　B　］には次のせりふが入ります。各せりふの意味が最もよく通るように，①～⑦の語（句）を空欄に一つずつ当てはめ，(41)～(45)に入るものの番号を選びなさい。

［A］ She won gold in (　　) (　　), carried (　　) (　41　) pain, and (　　) (　42　) (　　).

① finished　② in　③ on　④ Rio with
⑤ the top five　⑥ this injury　⑦ through

［B］ On (　43　), (　　) (　44　) (　　), but my (　　) (　45　) (　　).

① should be　② determination　③ I　④ sicker
⑤ keeps　⑥ me going　⑦ paper