

問題 I 次の文章を読んで、後の設問 (問 1 ~ 問 5) に答えなさい。

The research on menstruation and sport is limited and contradictory, and so, speaking practically, it seems that the answer to this question depends (a) the individual athlete. Some women experience pain, cramps, headaches, low energy, and fatigue during their periods, which can affect performance, but many athletes do not experience ① these symptoms. ② Few athletes publicly broach this seemingly taboo subject, which further complicates our understanding. One exception is Chinese swimmer Fu Yuanhui, who confessed during the 2016 Olympics, "My ③ period started last night, so I'm feeling pretty weak and really tired. But this isn't an excuse. At the end of the day I just didn't swim very well." Then again, marathoner Paula Radcliffe broke the Chicago Marathon world record during her period. Radcliffe has called for more study on the connections between the menstrual cycle and athletic performance, and she is critical (b) sport physicians who prescribe women norethisterone and other drugs to delay their periods for competitive reasons.

Historically, physicians and physical educators cautioned girls and women not to exercise during menstruation. We now know that regular exercise can decrease dysmenorrhea (painful menstruation) and may help regulate women's cycles. Just the same, intensive training can delay menarche and contribute (c) menstrual cycle irregularities. ④ There is provisional evidence to suggest that spikes in estrogen levels, which accompany the menstrual cycle, can contribute (c) tissue and ligament injuries, but there has not yet been enough definitive study of the subject.

〔出典: Women's Sports: What Everyone Needs to Know by Jaime Schultz, © Oxford University Press 2018. Reproduced with permission of Oxford Publishing Limited through PLSclear.〕

- 問 1 文中の空欄(a)から(c)に適切な接続詞または前置詞を記入しなさい。
- 問 2 下線部①these symptomsは何を指しますか。本文から適切な語を抜き出して書きなさい。
- 問 3 下線部②の period の同義語は何ですか。本文から適切な語を抜き出して書きなさい。
- 問 4 下線部③を日本語に訳しなさい。
- 問 5 下線部④を日本語に訳しなさい。

問題 II 次の文章を読んで、後の設問 (問 1 ~ 問 5) に答えなさい。

⑤ As first describe (a) the 1993 meeting of the American College of Sports Medicine, the female athlete triad referred to three interrelated conditions: disordered eating, amenorrhea (the loss of menstruation), and osteoporosis (porous bones). ① That definition has since evolved to include energy deficiency (with (b) without disordered eating), menstrual dysfunction, and low bone mineral density.

In brief, the problem starts with athletes who expand more energy than they consume. Low energy availability can be advertent or inadvertent in athletes who burn more calories exercising than they take in by eating and drinking. Chronic low energy availability can lead (c) menstrual irregularities, including ② amenorrhea. ③ Missed periods can mean lower estrogen levels, which affects bone density and bone strength, potentially increasing an athlete's risk of fractures. Experts caution that education, prevention, early diagnosis, and intervention are critical with regard to the female athlete triad.

〔出典: Women's Sports: What Everyone Needs to Know by Jaime Schultz, © Oxford University Press 2018. Reproduced with permission of Oxford Publishing Limited through PLSclear.〕

- 問 1 文中の空欄(a)から(c)に適切な接続詞または前置詞を記入しなさい。
- 問 2 下線部①That definitionは何を指しますか。本文から適切な語を抜き出して書きなさい。
- 問 3 下線部②の amenorrhea の意味を英語で説明しなさい。
- 問 4 下線部③を日本語に訳しなさい。
- 問 5 下線部④を日本語に訳しなさい。

問題 III 「Flow 体験」※(Csikszentmihalyi et al.1993) について書かれた次の文章を読んで、以下の設問 (問 1 ~ 問 6) に答えなさい。

In our studies, we found that every flow activity had this in common: It provided a sense of discovery, a creative feeling of transporting the person into a new reality. It pushed the person ( ① ) higher levels of performance and led to previously undreamed-of states of consciousness. ( ② ), it transformed the self by making it more complex. In this growth of the self lies the key to flow activities.

A simple diagram might help explain why this should be the case. Let us assume that the figure below represents a specific activity—( ③ ), the game of tennis. The two theoretically most important dimensions of the experience, challenges and skills, are represented on the two axes of the diagram. The letter A represents Alex, a boy who is learning to play tennis. The diagram shows Alex at four different points in time. When he first starts playing(A1), Alex has practically no skills, and the only challenge he faces is hitting the ball over the net. This is not a very difficult feat, but Alex likely to enjoy it ( ④ ) the difficulty is just right for his rudimentary skills. So at this point he will probably be in flow. But he cannot stay there long. ( ⑤ ), if he keeps practicing, his skills are bound to improve, and then he will grow bored just batting the ball over the net(A2). Or it might happen that he meets a more practiced opponent, in which case he will realize that there are much harder challenges for him than just lobbing the ball—in that point, he will feel some anxiety(A3) concerning his poor performance.

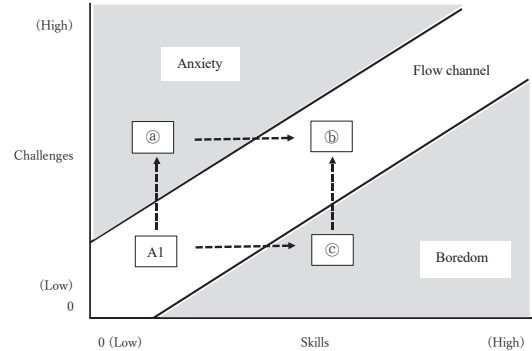
Neither boredom ( ⑥ ) anxiety are positive experiences, so Alex will be motivated to return to the flow state. ⑦ How is he to do it? Glancing again at the diagram, we see that if he is bored(A2) and wishes to be in flow again, Alex has essentially only one choice: to increase the challenges he is facing. (He also has second choice, which is to give up tennis altogether—in which case A would simply disappear from the diagram.) By setting himself a new and more difficult goal that matches his skills—for instance, to beat an opponent just a little more advanced than he is—Alex would be back in flow(A4). If Alex anxious(A3), the way back to flow requires that he increase his skill. Theoretically he could also reduce the challenges he is facing, and thus return to flow where he started (in A1), but ( ⑧ ) it is difficult to ignore challenges once one is aware that they exist. The diagram shows that both A1 ( ⑨ ) A4 represent situations in which Alex is in flow. Although both are equally enjoyable, ⑩ the two states are quite different in that A4 is more complex experience than A1. It is more complex because it involves greater challenges, and demands greater skills from the player. ( ⑪ ) A4, although complex and enjoyable, does not represent a stable situation,

either. As Alex keeps playing, either he will become bored by the stale opportunities he finds at that level, ( ⑫ ) he will become anxious and frustrated by his relatively low ability. So the motivation to enjoy himself again will push him to get back into the flow channel, but now at a level of complexity even higher than A4. It is ⑬ this Dynamic feature that explains why flow activities lead to growth and discovery. One cannot enjoy doing the same thing at the same level for long. We grow either bored or frustrated; and then the desire to enjoy ourselves again pushes us to stretch our skills, or to discover new opportunities for using them.

〔出典: Flow: The Psychology of Optimal Experience by Mihaly Csikszentmihalyi. © 1990 by Mihaly Csikszentmihalyi. Reproduced with permission of Brockman, Inc.〕

※Flow 体験: 「ある人が完全に課題に没頭し、時間の経過を忘れ、疲労感を覚え、他のことには全く関心が向けられない時に経験される主観的な状態」(Csikszentmihalyi et al.,1993)

undreamed-of: 思いもかけない axes: 軸 (axis の複数形) rudimentary: 初歩の/未熟な opponent: 試合の相手 altogether: 完全に stable: 安定した stale: 新鮮でない/つまらない



Flow: The Psychology of Optimal Experience by Mihaly Csikszentmihalyi, from Wikimedia Commons. [https://commons.wikimedia.org/wiki/File:Flow\\_theory.jpg#](https://commons.wikimedia.org/wiki/File:Flow_theory.jpg#) Licensed under the Creative Commons Attribution-Share Alike 2.0 Generic license.

- 問 1 文中の空欄 (①) から (⑫) に入る適切な前置詞を書きなさい。
- 問 2 文中の空欄 (⑦) から (⑩) に入る適切な語句を下の語群から選び、必要に応じて適切な形 (文頭は大文字にする等) にして記入しなさい。  
because    but    after a while    for example    in short    in practice
- 問 3 下線部⑬について、Alex が「退屈」な状態から「フロー」状態に、また「不安」な状態から「フロー」状態に戻るためにはどうしたらよいか、それぞれ日本語で説明しなさい。

問4 下線部②について、「2つの状態」の相違点を日本語で説明しなさい。

問5 下線部③について、その内容を端的に説明している部分を本文から抜き出し、その部分を日本語に訳しなさい。

問6 図の①から④に当てはまるものを、A2, A3, A4の中から選びなさい。

2025GE02

**問題Ⅰ** 次の文章を読んで、後の設問(問1～問4)に答えなさい。\*の単語は、文章の下部に訳があります。

Eliminating worn-out cells extends the healthy lives of lab mice — an indication that treatments aimed at killing off these cells, or blocking their effects, might also help to combat age-related diseases in humans.

As animals age, cells that are no longer able to divide — called senescent cells — accrue all over their bodies, releasing molecules that can harm nearby tissues. Senescent cells are linked to diseases of old age, such as kidney failure and type 2 diabetes.

To test the cells' role in ageing, Darren Baker and Jan van Deursen, molecular biologists at the Mayo Clinic in Rochester, Minnesota, and their colleagues engineered mice so that their senescent cells would die off when the rodents were injected with a drug.

The work involved sophisticated genetic tinkering and extensive physiological testing, but the concept has an elegant simplicity to it. "We think these cells are bad when they accumulate. We remove them and see the consequences," says Baker. "That's how I try to explain it to my kids."

**Live long and prosper**

Mice whose senescent cells were killed off over six months were healthier, in several ways, than a control group of transgenic mice in which these cells were allowed to build up. Their kidneys worked better and their hearts were more resilient to stress, they tended to explore their cages more and they developed cancers at a later age. Eliminating senescent cells also extended the lifespans of the mice by 20–30%, Baker and van Deursen report in *Nature* on 3 February.

The research is a follow-up to a 2011 study, in which their team also found that eliminating senescent cells delayed the onset of diseases of old age in mice, although that work had been done in mice which had a mutation that causes premature ageing.

In the hope of discovering therapies for diseases of old age, researchers are already looking for drugs that can directly eliminate senescent cells or stop them from churning out factors that damage neighbouring tissue. They include Baker and van Deursen, who have licensed patents to develop such drugs to a company van Deursen has co-founded.

The team's experiment "gives you confidence that senescent cells are an important target," says Dominic Withers, a clinician-scientist who studies ageing at Imperial College London and who co-wrote a News and Views article for *Nature* that accompanies the Mayo Clinic report. "I think that there is every chance this will be a viable therapeutic option."

《出典：Destroying Worn-Out Cells Makes Mice Live Longer by Ewen Callaway, *Nature* magazine, from *Scientific American*, Feb 3, 2016. Reproduced with permission of Springer Nature.》

2025GE02

**問1** 次の(1)～(5)の各問いに答えなさい。

- (1) Mayo Clinic は米国のどこの州にありますか。本文から適切な語を抜き出して書きなさい。
- (2) 下線部①の these は何を指しますか。
- (3) 2011年研究は、どのようなマウスを使いましたか。本文から2語で答えなさい。
- (4) 老化細胞を死滅させたマウスは、寿命がどの程度延長しましたか。
- (5) Withers はどこの国の研究者ですか。

**問2** 下線部②を日本語に訳しなさい。

**問3** 次の文章について、本文の内容と一致するものには○を、一致しないものには×を解答欄に記入しなさい。

- (1) 老化細胞は、腎不全や2型糖尿病などの老年期の病気に関連する。
- (2) 薬剤を注射すると老化細胞が活性化されるマウスを作製した。
- (3) 老化細胞を死滅させたマウスは、腎機能は良好である。
- (4) 老化細胞を死滅させたマウスは、がんを発症しない。
- (5) 老化細胞は、創薬の対象になり得ない。

**問4** 下線部③を日本語に訳しなさい。

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**問題Ⅱ** 以下の記事を読み、次の各問いに日本語で答えなさい。

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2025GE02

《出典：the first chapter in *Nature* 597: 608-623, 2021.》

**問1** Ali, Dan, Ada の人物関係について説明しなさい。

**問2** Principal investigators (PIs) とは何か、本文の内容に沿って答えなさい。

**問3** 下線部を和訳しなさい。

**問4** Ali がインタビューで説明した内容は何か、本文の内容に沿って答えなさい。

**問5** Ali は何のために助成金が必要だったのか、本文の内容に沿って答えなさい。

**問6** この文章に書かれている「イギリスとアメリカの研究者雇用の違い」について簡単に説明しなさい。

◆英語

問 次の文章を読んで、後の設問 (問1～問7) に答えなさい。

① The U.S. government does not seek "regime change" in China akin to the breakup of the Soviet Union in 1991. U.S. Deputy Secretary of State Kurt Campbell said Wednesday at a forum in Washington.

Responding to a question about a recent article in Foreign Affairs penned by a high-profile former lawmaker and a former Trump administration official calling for the United States to adopt the goal of defeating ② ( ㉞ ) in China, Campbell said he disagreed.

③ "We need to accept China as a major player and accept that doing constructive diplomacy with them is in American strategic interests," Campbell said, listing the invasion of Ukraine, the Israel-Gaza conflict, famine in Africa and "challenges in the Red Sea" as priorities.

"The world is ④ ( ㉟ ) and ( ㊀ ) enough right now," he said. "I do not believe it is in our interest at the current juncture to add to our list: Let's try to topple the other leading power on the global stage."

The article was written April 10 by Mike Gallagher, a now former Republican lawmaker who chaired the House Select Committee on the Chinese Communist ⑤ ( ㊁ ), and Matt Pottinger, who was former President Donald Trump's deputy national security advisor.

It argued the Biden administration's policy of "managing competition" with China was short-sighted and that ⑥ Washington should return to a Cold War-style foreign policy aimed at "winning" the competition by removing a communist regime and replacing it with a democracy.

出典: US doesn't want 'regime change' in China, diplomat says by Alex Willemyns, from RFA, Jun 12, 2024. Copyright © 1998-2023, RFA. Used with the permission of Radio Free Asia, 2025 M St. NW, Suite 300, Washington DC 20036.

問1 下線部①を日本語に訳しなさい。

問2 ( ㉞ ) に入る適切な単語を次の①～⑤のうちから選び、番号で答えなさい。

- ① communism ② nationalism ③ monetarism ④ individualism ⑤ buddhism

問3 下線部③のように述べる理由は何か。日本語で説明しなさい。

問4 ( ㉟ ) に入る適切な単語の組み合わせを次の①～③のうちから選び、番号で答えなさい。

- ① dangerous and unpredictable ② difficult and uneuropean ③ wide and unamerican

問5 ( ㊁ ) に入る適切な単語を次の①～⑤のうちから選び、番号で答えなさい。

- ① People ② Color ③ Party ④ Building ⑤ School

問6 : 下線部⑥を日本語に訳しなさい。

問7 : 下線部①と下線部⑥の内容は決して矛盾していないが、その理由を日本語で説明しなさい。

◆論文筆記

問 次の2問の中から1問を選び、1,400 から 1,600 字で答えなさい。

① あなたの修士論文研究計画を総合経営研究科で行うことの意味を、グローバルな視点とローカルな視点の両面から論じなさい。

② 地方における外国人労働者の急増について、企業経営の観点から利点および課題を整理した上で、今後求められる新たな施策を論じなさい。