

日本医科大学

令和2年度 入学試験問題

英語問題用紙(後期)

試験時間	90分
問題用紙	1～18頁

注意事項

1. 指示があるまで問題用紙は開かないこと。
2. 問題用紙および解答用紙に落丁、乱丁、印刷の不鮮明な箇所があったら、手を挙げて監督者に知らせること。
3. 解答が終わっても、または試験を放棄する場合でも、試験終了までは退場できない。
4. 携帯電話等の電子機器類は電源を必ず切り、鞆の中にしまうこと。
5. 机には、受験票と筆記用具(鉛筆、シャープペンシル、消しゴム)および時計(計時機能のみ)以外は置かないこと。(耳栓、コンパス、定規等は使用できない。)
6. 問題用紙および解答用紙に受験番号と氏名を記入すること。
7. 解答はすべて解答用紙の所定の解答欄に記入すること。欄外には何も書かないこと。
8. この問題用紙の余白は自由に用いてよい。
9. 質問、トイレ、体調不良等で用件のある場合は、無言のまま手を挙げて監督者の指示に従うこと。
10. 中途退室時は、問題用紙および解答用紙を裏返しにすること。
11. 受験中不正行為があった場合は、試験の一切を無効とし、試験終了時間まで別室で待機を命じる。
12. 試験終了後、解答用紙は裏返し、問題用紙は持ち帰ること。

受験番号	
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氏名	
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[I] 下記の指示にしたがって英文を書け。解答用紙(記述用)に記入すること。

Write an essay in an academic style explaining one important thing that you think should be changed about your high school. Give specific reasons and examples to support your ideas.

(下書き用紙)

[II] 次の英文を読み、設問に答えよ。解答用紙(記述用)に記入すること。

1. In a study of healthy volunteers, National Institutes of Health researchers found that rest may play a critical role in learning. “Everyone thinks you need to ‘practice, practice, practice’ when learning something new. Instead, we found that resting may be just as critical to learning as practice,” said Leonardo G. Cohen, M.D., Ph.D., senior investigator at NIH’s National Institute of Neurological Disorders and Stroke and a senior author of the paper published in the journal *Current Biology*. “Our ultimate hope is that the results of our experiments will help patients recover from the paralyzing effects caused by strokes and other neurological injuries by informing the strategies they use to ‘relearn’ lost skills.”
2. The study was led by Marlene Bönstrup, M.D., a postdoctoral fellow in Dr. Cohen’s lab. Like many scientists, she held the general belief that our brains needed long periods of rest, such as a good night’s sleep, to strengthen the memories formed while practicing a newly learned skill. But after looking at brain waves recorded from healthy volunteers in learning and memory experiments at the NIH Clinical Center, (A)she started to question the idea.
3. The waves were recorded from right-handed volunteers with a highly sensitive scanning technique called magnetoencephalography. The subjects sat in a chair facing a computer screen and under a long cone-shaped brain scanning cap. The experiment began when they were shown a series of numbers on a screen and asked to type the numbers as many times as possible with their left hands for 10 seconds; take a 10 second break; and then repeat this trial cycle of alternating practice and rest 35 more times. This strategy is typically used to reduce any complications that could arise from fatigue or other factors.
4. As expected, the volunteers’ speed at which they correctly typed the numbers improved dramatically during the first few trials and then leveled off around the 11th cycle. When Dr. Bönstrup looked at the volunteers’ brain waves she observed something interesting. “I noticed that participants’ brain waves seemed to change much more during the rest periods than during the typing sessions,” said Dr. Bönstrup. “This gave me the idea to look much more closely for when learning was actually happening. Was it during practice or rest?”
5. By reanalyzing the data, she and her colleagues made two key findings. First, they found that the volunteers’ performance improved primarily during the short rests, and not during typing. The improvements made during the rest periods added up to the overall gains the volunteers made that day. Moreover, these gains were much greater than the ones seen after the volunteers returned the next day to try again, suggesting that the early breaks played as critical a role in learning as the practicing itself.

6. Second, by looking at the brain waves, Dr. Bönstrup found activity patterns that suggested the volunteers' brains were consolidating, or solidifying, memories during the rest periods. Specifically, they found that the changes in the size of brain waves, called beta rhythms, correlated with the improvements the volunteers made during the rests. Further analysis suggested that the changes in beta oscillations primarily happened in the right hemispheres of the volunteers' brains and along neural networks connecting the frontal and parietal lobes that are known to help control the planning of movements. These changes only happened during the breaks and were the only brain wave patterns that correlated with performance.

問1 次の(1)～(3)の内容は、本文中のどの段落で述べられているか。該当する段落の番号をそれぞれ書け。

- (1) Bönstrup's previous view about the time it takes to form new memories and learn new skills
- (2) possible practical applications of the researchers' findings
- (3) an explanation of the method used to conduct the experiment

問2 下線部(A)はどのようなことを意味しているか。the idea が示すものを明確にして日本語で説明せよ。

問3 本文中に言及されている研究に関してその内容に合わないものを(あ)～(か)から2つ選び、その記号を書け。さらにそのように判断した理由を、本文および選んだ選択肢の具体的な内容に照らして日本語で説明せよ。

- (あ) The overall increase in the typing speed of the participants was largely made on the first day.
- (い) Healthy right-handed subjects were recruited to participate in a study where they practiced a new skill.
- (う) The participants repeated the process of typing tasks and rest periods for a total of thirty-five sequences.
- (え) The brain activity of the participants was monitored during both the typing sessions and the rest periods.
- (お) Changes in the size of beta waves occurred in areas of the brain associated with planning movement.
- (か) The typing speed of the volunteers gradually increased throughout the entire experiment.

問4 restの役割について、この研究で明らかになったことを日本語で説明せよ。

(下書き用紙)

[III] 設問に答えよ。解答用紙(記述用)に記入すること。

問1 次の英文において、 ~ のそれぞれに最もふさわしい動詞を次の語群から選び、必要ならば適切な形に直して1語で書け。なお、同じものを2度以上用いてはならない。

Hypnosis, while appearing to hold quite magical powers, is merely a state of deep relaxation. It an altered state of consciousness during which the client is their attention totally on the therapist and is thus receptive to suggestions and instructions from them. During a hypnotic state, the person is so relaxed that their subconscious processes can be accessed. From the fifteenth and sixteenth centuries onward physicians from many nations further developed and refined the concept of hypnosis and its uses. Although this knowledge throughout the European continent and to the British Isles, it mostly confined to a small group and never quite reached the attention of the masses.

define	focus	involve	occur	pay
prevent	receive	remain	spread	transport

問2 次の英文 A～C のそれぞれにおいて、下線部(1)～(5)のいずれか1か所に文法的な誤りがある。誤りの番号を解答欄にそれぞれ記入し、正しい英語に直した単語1語を矢印の右側に書け。

A. Personality is made up (1)of a range of factors (2)individual to each person, including thoughts, values and emotions. Personality is thought to have an impact (3)to behavior and is relatively stable and generalizable in (4)that people would be expected to behave in (5)similar ways across time and across situations.

B. Reasoning is the capacity for (1)consciously making sense of things, applying logic, for establishing and verifying facts, and changing or justifying beliefs based on new or existing information. It is (2)thus associated with thinking, cognition and intellect. Reasoning helps to generate new knowledge and to organize (3)existing knowledge, so that it is more usable for future mental work. Reasoning is therefore (4)central to many forms of thought such as scientific, (5)critically and creative thinking, argumentation, problem-solving and decision-making.

C. Morality is our understanding of (1)that is right and wrong and is (2)subject to the morality of the culture and society we live in. Morality does not develop in a vacuum but is greatly influenced by parents and others (3)that a child interacts with. Between the ages of two and five, many children start to show some basic (4)morally based behaviors and beliefs; they might tell the teacher if someone is being “mean” to (5)another child, for example.

[IV] 以下の設問に答えよ。

解答用紙(マークシート)に記入すること。各問の末尾に示された、
内の数字に対応する欄に解答せよ。

問1 registry という名詞について、設問に答えよ。

(1) 第1アクセントが置かれる部分を下線部(a)～(c)から1つ選べ。 1

reg - is - try
(a) (b) (c)

(2) 次のa～eの単語のうち、(1)で選んだ下線部と同じ発音をもち、しかもその部分に第1アクセントが置かれるものを1つ選べ。 2

- a. excitement
- b. expose
- c. illegal
- d. intimate
- e. preface

問2 legitimate という形容詞について、設問に答えよ。

(1) 第1アクセントが置かれる部分を下線部(a)～(d)から1つ選べ。 3

le - git - i - mate
(a) (b) (c) (d)

(2) 次のa～eの単語のうち、(1)で選んだ下線部と同じ発音をもち、しかもその部分に第1アクセントが置かれるものを1つ選べ。 4

- a. automation
- b. bear
- c. lethal
- d. pinpoint
- e. survive

問3 character という単語の ch の文字で表される部分と同じ発音をもたない単語を a～e からすべて選べ。 [5]

- a. chord
- b. chore
- c. Czech
- d. scheme
- e. spinach

問4 次のそれぞれの意味をもつ単語を a～e から1つずつ選べ。

(1) extreme sadness [6]

(2) a husband or wife [7]

- a. ambulance
- b. endeavor
- c. grief
- d. heir
- e. spouse

問5 次のそれぞれの意味をもつ単語を a～e から1つずつ選べ。

(1) not made from natural substances [8]

(2) including only the most obvious aspects of something [9]

- a. maternal
- b. superficial
- c. susceptible
- d. synthetic
- e. transparent

問 6 次のそれぞれの意味を持つ単語を a～e から 1 つずつ選べ。

(1) serious and immediate danger 10

(2) a thing causing inconvenience 11

- a. deception
- b. gratitude
- c. peril
- d. proponent
- e. nuisance

問 7 次のそれぞれの意味を持つ単語を a～e から 1 つずつ選べ。

(1) extremely important and urgent 12

(2) very great in amount or degree 13

- a. imperative
- b. infinite
- c. intimate
- d. intrinsic
- e. intuitive

問 8 次のそれぞれの意味を持つ単語を a～e から 1 つずつ選べ。

(1) to obey an order, rule, or request 14

(2) to express complete disapproval of 15

- a. commence
- b. comply
- c. condemn
- d. conserve
- e. constitute

(下書き用紙)

[V] Read the text and answer the questions that follow.

解答用紙(マークシート)に記入すること。各問の末尾に示された、
内の数字に対応する欄に解答せよ。

As a German citizen who came to the United States relatively late in life, I was initially struck by how much more positive thinking was valued in the United States than back in Europe. In Germany, if you asked how someone was doing, you would usually get a (1) frank answer, such as “I didn’t sleep well last night,” or “My puppy got sick and it’s bothering me.” In America, I noticed how people would say, “I’m fine”—even if something was bothering them.

As unfamiliar as this widespread optimism was to me, I felt thankful for it and (2) did not see it as a counterproductive presence in society. I felt people were being A and not dumping all their problems on one another. They valued being in a good mood and keeping others in a good mood as well. I gained a more nuanced perspective, though, when I began to study optimism during the mid-1980s.

Martin E. P. Seligman, founder of the positive psychology movement and my research advisor at the University of Pennsylvania in Philadelphia, conceived of optimism as beliefs or expectations about the future that are based on past experiences of success. Seligman found that we are most optimistic when we assess reality as we’ve known it thus far and logically conclude that the future will likely work out in a similar fashion. If a batter in baseball has already hit .300 with twenty home runs over the past three months of the season, a manager getting ready for a big game will put him in the cleanup position over the player who has hit only .200 with three home runs. Based on experience, the manager believes it more likely that the .300 hitter will get on base in the game—he has a “positive expectation of success.”

Seligman’s definition seemed helpful but unable to capture the entire phenomenon of optimism. With his definition the dominant one, many in the (3) discipline seemed to possess an apparent blind spot. Empirical or quantitatively oriented psychologists were hardly writing about or studying positive fantasies or dreams. Influenced by the study of human behavior, they focused on understanding the rational, experience-based judgments people might make about future likelihoods. Expectations were easy to measure and study, while fantasies seemed vague or intangible and thus not suitable for objective analysis.

I sensed that positive fantasies were an important part of the human experience, and wanted to explore in depth how they work and affect our behavior. For inspiration, I looked back to the origins of modern psychology—specifically, to the late nineteenth-century thinker William James. In his chapter entitled “The Perception of Reality,” in volume two of his seminal work *The Principles of Psychology*, James remarked, “Everyone knows the

difference between imagining a thing and believing in its existence, between supposing a proposition and acquiescing in its truth." James was talking about people's outlooks on the past and present, but this distinction also seemed to hold true for the future. It suggested to me that there were in fact two ⁽⁴⁾distinct kinds of optimism worth studying: positive expectations that were based on past experience, and the more free-flowing thoughts and images that were rooted in wishes and desires.

I wondered in particular if positive dreams disconnected from past experience would affect people's willingness and ability to take action in their lives. Scholars like Albert Bandura and Martin E. P. Seligman had probed the connection between positive expectations and performance, establishing that expectations increased effort and actual achievement. In their research studies, people who judged their chances of success more favorably based on past experience actually did more to pursue them and achieved their goals more readily. Would fantasizing about something likewise increase the chances of the fantasies actually coming about? Could a flight of fancy, a dream detached from actual experience in the past, energize someone to take action and accomplish the dream?

I thought it probably could. There was no reason to think dreams were any different in their practical impact than expectations; all forms of positive thinking seemed inherently helpful. Wanting to investigate this further, I conducted a study of twenty-five obese women enrolled in a weight-loss program. Before the program began, I asked participants how much weight they wished to lose and how likely it was that they would succeed. Then I asked each participant to complete several short open-ended scenarios. In some they were asked to imagine having successfully completed the program and in others being in situations in which they were tempted to violate their diets.

"You have just completed Penn's weight-loss program," one scenario read. "Tonight you have made plans to go out with an old friend whom you haven't seen in about a year. As you wait for your friend to arrive, you imagine . . ." In another scenario, I asked participants to imagine that they had come upon a plate of doughnuts. What would they think, feel, or do? Asking participants in the study to rate how positive or negative their fantasies seemed to them, I measured whether they dreamed about an idealized outcome of weight loss as well as whether they fantasized about weight loss being an easy process. It was the participants' own, subjective assessment of their dreams—whether they found their dreams to be positive or negative—which interested me, not whether I as a researcher happened to think their dreams were positive or negative.

The results of this initial study got my attention. 1 After one year, women who assessed that they were likely to lose weight shed an average of twenty-six pounds more than those who didn't believe they would lose much weight. But here's the kicker. 2 Irrespective of their judgments based on past experience, women who had strong positive fantasies about slimming down—the ones who most positively pictured themselves looking

slender and attractive when going out with their friend, or who pictured themselves passing by the doughnuts without batting an eye—lost twenty-four pounds less than those who pictured themselves more negatively. Dreaming about achieving a goal apparently didn't help that goal come to fruition. The starry-eyed dreamers in the study were less energized to behave in ways that helped them lose weight.

1. Which of the following is closest in meaning to the word *frank*, marked (1) in the text?
 - a. easy
 - b. extended
 - c. honest
 - d. hurried

2. Which of the following is closest to the author's meaning of the phrase marked (2) in the text?
 - a. She did not find herself being extremely different from other people in American culture.
 - b. She did not sense that there is room for positive thinking in communities.
 - c. She felt uneasy about her presence in American society.
 - d. She understood that there is value in the way Americans greet each other.

3. Choose the best word to fill .
 - a. considerate
 - b. objective
 - c. pessimistic
 - d. stubborn

4. Why does the author discuss baseball in the third paragraph? Choose one. 19
- a. To demonstrate how positive expectations are crucial to success in sports.
 - b. To explain why Seligman came to realize the importance of studying positive thinking.
 - c. To give an example of using previous successes as a predictor of future performance.
 - d. To illustrate the weak points in Seligman's definition of optimism.
5. Which of the following is closest in meaning to the word *discipline*, marked (3) in the text? 20
- a. authority
 - b. circumstance
 - c. field
 - d. rules
6. Choose ALL of the statements that are true of Seligman's research on positive thinking. 21
- a. Seligman claimed that optimism toward the future is based on successful experiences in the past.
 - b. Seligman found that being able to fantasize about success is the basis of optimism.
 - c. Seligman quantified people's dreams and fantasies in order to research them.
 - d. Seligman found that people who have a history of past successes are more likely to try harder to achieve their future goals.
7. Which of the following is closest in meaning to the word *distinct* as used in the text, marked (4) in the text? 22
- a. clear
 - b. important
 - c. related
 - d. separate

8. Choose ALL of the statements that are true about the author's study.

- a. The participants were all overweight women.
- b. The author judged each participant's chance of success in the program.
- c. The participants were weighed one year later.
- d. The author asked participants to imagine how they would react in certain scenarios.

9. Where should the following sentence be placed in the text? Choose the number corresponding to the location.

It impeded it from happening.

- a.
- b.
- c.
- d.

10. Which one of the following is true, according to the text?

- a. Women who had positive expectations of success lost less weight than those who didn't.
- b. Participants who imagined themselves looking slim lost more weight than those who didn't.
- c. Women who had successfully lost weight in the past lost more weight in the study.
- d. The author expected that positive fantasies and dreams would yield success.

使用著作物:

Adapted from the article from the National Institutes of Health News Releases website (<https://www.nih.gov/news-events/news-releases>), April 12, 2019 (accessed July, 2019).

Adapted from an excerpt of a book by Sandi Mann, *Psychology: A Complete Introduction*, Hachette, 2016.

Adapted from an excerpt of a book by Gabriele Oettingen, *Rethinking Positive Thinking: Inside the New Science of Motivation*, Current, 2014.