平成21年度　日本医科大学入学試験問題

〔 英　語 〕

受験番号	

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配布後，監督者の指示に従い，配布枚数の確認を行うこと。
   （問題冊子9ページ，解答用紙1枚）
   落丁，乱丁，印刷の不鮮明の箇所があったら，手を挙げて監督者に知らせること。
3. 解答時間は9時00分から10時30分までの90分。
   なお，試験開始後40分経過後でなければ退室は認めない。
4. 机上には，受験票と筆記用具および時計（計時機能のみ）以外は置かないこと。
5. 筆記用具は鉛筆，シャープペンシル，消しゴムのみとする。
   （コンパス，定規等は使用できない。）
6. 止むを得ず下敷を使用する場合は，監督者の許可を得ること。
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草稿等に自由に用いてよい。
9. 耳栓の使用はできない。
10. 携帯電話等の電源は必ず切り、鞄の中にしまうこと。
11. 質問，用便，中途退室など用件のある場合は，無言のまま手を挙げて監督者の指示に従うこと。
12. 受験中不正行為があった場合は，退室を命じ試験の一切を無効とする。
13. 退室時は，試験問題および解答用紙を裏返しにすること。

［I］　次の英文を読んで，設問に答えなさい。

When you unexpectedly hear the sound of a barking dog, your heart will quicken and the volume of blood flowing to your muscles will increase. At the same time, an important hormone, nerepinephrine, will be released in your brain, making you more alert and attentive. In truly dangerous situations, however, this response, quick as it is, may prove to be too slow. As in a power blackout, the demands of the body might exceed the supply of resources. Many animals have become other animals' dinners in the fraction of a second required to respond to danger. (1) If only they could have known in advance when to increase the power supply and pay closer attention. If they could have anticipated the danger, a more effective response might have been produced.

Over the ages, brains have evolved a number of mechanisms for predicting the future. The biological purpose of these mechanisms is to prepare the body and mind for future events and at the same time to minimize consumption of the body's energy resources. From a physiological perspective, there are two interrelated systems that influence the body's energy consumption: *arousal* and *attention*. The arousal system controls heart rate, breathing, sweating, and many other body functions associated with movement. The attention system is more subtle. Attention prompts the brain to be more engaged with the world. [A] of looking at nothing in particular, our gaze becomes focused. [A] of taking no notice of a conversation, we pay close attention to what is being said. [A] of daydreaming, we concentrate on the here and now. All of this takes energy.

Arousal and attention levels change according to both the actual and anticipated demands of the environment. When we think of how arousal and attention react to the environment, we tend to think of them as *increasing*. However, the arousal and attention systems can also *reduce* or *inhibit* responsiveness. (2) The experiences of boredom and sleepiness are no less manifestations of the body's reactions to the demands of the environment than are the experiences of excitement and joy.

We may also tend to think of arousal and attention as systems that deal with the uncertainties of life. But even if we knew with exact precision and certainty all of the future events in our lives, we would still need anticipatory mental and physical changes to prepare our minds and bodies for the upcoming events. Suppose, for example, that I know that at 9:18 a.m. I will encounter an obstacle on the path requiring me to ride my bicycle around it. This godlike advance knowledge does not free me from having to attend to the object and make the

appropriate motor movements at the appointed time. [B] can I execute any of the needed mental or physical maneuvers before they are required.

Of course, such perfect knowledge of the future does not exist, and in preparing the body and mind for a future that has countless possibilities, our instincts are depressingly pessimistic: nature tends to assume the worst. Consider, for example, the slamming of a door. Even though we may see that the door is about to slam shut, it is difficult to suppress the instinctive shock and urge to defend ourselves. We know the door poses no danger to us, but the sound of the slamming door provokes a powerful bodily response anyway. Despite our annoyance, nature knows best: it is better [ア] than [イ].

問1　下線部（1）について，they の指すものを明確にしながら日本語に訳しなさい。

問2　下線部（2）を日本語に訳しなさい。

問3　二重下線部の quick as it is に入れ替えて使える英語表現を書きなさい。なお，quick と it は必ず用いること。

問4　3ヶ所ある [A] に共通して当てはまる英語1語を書きなさい。

問5　[B] に当てはまる適切な英語1語を a ～ d から選び，記号で答えなさい。

a. Also　b. Either　c. Nor　d. Not

問6　[ア] と [イ] に入れる表現の組み合わせとして最も適当なものを a ～ d から選び，記号で答えなさい。

a. ア．to miss a single genuinely dangerous situation
　 イ．to respond to a thousand false alarms
b. ア．to respond to a thousand false alarms
　 イ．to miss a single genuinely dangerous situation
c. ア．to miss a thousand false alarms
　 イ．to respond to a single genuinely dangerous situation
d. ア．to respond to a single genuinely dangerous situation
　 イ．to miss a thousand false alarms

問 7　次の a ～ e から，本文の内容と一致する英文を 1 つ選び，記号で答えなさい。

a. One of the reasons brains developed the ability to predict future events was to help their owners formulate better responses to danger.

b. Our levels of arousal and attention vary only in response to what our brains expect to happen in the future.

c. The ability of our brains to make guesses about what is going to happen does not help our bodies conserve energy.

d. If we could accurately predict future events, we would not need to change our levels of arousal or attention to deal with them.

e. Instinct normally tells our bodies to anticipate a favorable outcome to any given situation.

問 8　次の(1)と(2)において，ア ～ エの単語の中で最も強く発音される音節の母音が，左の単語の最も強く発音される母音と同じものがそれぞれ 1 つある。その語の記号を選んで書きなさい。

(1)	focus	ア. blood	イ. concentrate	ウ. muscle	エ. provoke
(2)	energy	ア. breathing	イ. certainty	ウ. precision	エ. sweating

［II］ 次の英文を読んで，設問に答えなさい。

The need to solve problems is an everyday feature of our lives. There are many different types of problem, [1] from simple to complex, and (1) trivial to life threatening. A well-known example of a complex, life-threatening problem [2] in the space flight of Apollo 13. During the journey toward the moon, some 200,000 miles from the earth, there was an explosion and the spacecraft suffered extensive damage. This was announced to mission control in the famously understated message, "Houston, we've had a problem." The problem was how to turn the spacecraft around and return to the earth while [3] the lives of the three astronauts aboard with limited power, water and oxygen. Most people do not have to deal with such dramatic problems, but nevertheless they deal with problems daily. You may, for example, be [4] with the problem of how to get home when you have missed the bus, how to get in touch with someone when you have lost their telephone number, how to help a friend who is unhappy, or how to [5] an excellent paragraph for your English homework.

Since the problems people deal with are so (2) diverse, it is not necessarily simple to define what a problem is. Some scholars say that problems occur when people cannot see how to get from their (3) current situation, which is probably an undesirable one, to a better one. This idea [6] that two of the essential elements of any problem are the initial situation and the goal. For the crew of Apollo 13, the initial situation was being in deep space in a damaged spacecraft. If you are trying to write a good English paragraph, the initial situation may [ ]. The goal is the situation you want to achieve (returning safely to the earth or composing a paragraph that will get you a top grade). Something is only a problem if you do not know how to get from the start state to the goal state, since if you can (4) instantly see how to achieve the goal it is not a problem. For [A] problem there are different types of processes or actions that enable us to get from one state to a better one; these are called operators. For the crew of Apollo 13 the operators included changes to navigation plans, conserving water, and living in the lunar module.

[B] feature of many problems is that the process of going from the start state to the goal state cannot be achieved in one stage – you have to pass through a number of intermediate stages to reach the goal. When you try to solve a complex problem, you have to break it up into a series of [C] smaller goals that you tackle one at a time. Each sub-goal is used to reduce the distance between the initial state and the goal state.

問 1 [1] ～ [6] に入れるのに最も適当な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 語で書きなさい。なお，同じ語を繰り返して用いないこととする。

arise	cause	encounter	face	indicate	lead
produce	range	result	survive	sustain	transfer

問 2 下線部(1)から(4)を言い換える場合に最も適当な単語を，それぞれ a ～ d から選び，記号で答えなさい。

(1)	**trivial**	a. crucial	b decisive	c. minor	d. profound
(2)	**diverse**	a. abundant	b. complicated	c. serious	d. varied
(3)	**current**	a. inconvenient	b. inevitable	c. present	d. temporary
(4)	**instantly**	a. confidently	b. easily	c. eventually	d. immediately

問 3 [A] ～ [C] に入れるのに適切な語を，a ～ d から 1 つずつ選び，記号で答えなさい。

a. all　b. another　c. every　d. other

問 4 二重下線部がthe initial situationの一例を示すものとなるように，[　　]の部分を完成させなさい。

[III] *Read the conversation and provide one suitable word for each blank space to complete the summary that follows it.*

A: Ken, could I have a word? I just wanted to say that I think you've been doing a really good job in class this semester. The assignment you turned in last week was excellent, too.

B: Thank you, Professor Jenkins. I spent quite a lot of time on it.

A: Yes, I could see that you had. I was also wondering what your plans for the summer vacation are.

B: Well, apart from the tennis club's training camp in Nagano, I don't have anything in particular planned.

A: Have you heard about the university's intensive English program in the second week of August?

B: Yes, I have. It looks like a great program, but I've a feeling that's when the tennis club's trip is scheduled. I'm not completely sure, though.

A: Well, do check. I think you could get a lot out of the program, and I'd be pleased to see you there.

B: Thank you. There's a chance I've got the dates wrong, and I'd certainly like to attend if I can. I'll check right away.

A: Why don't you drop by my office this afternoon and tell me what you find out?

B: Sure.

Summary

Professor Jenkins [A] Ken both for his work in class and for the assignment he submitted recently. He also recommended that Ken [B] in the university's summer English program. [C] Ken was interested in the idea, he thought the English program might [D] on the same dates as the tennis club's training camp. He agreed to check and to let Professor Jenkins [E] in the afternoon.

[IV] *Read this passage and answer the questions that follow.*

In the early 1990s, a study was carried out at Berlin's elite Academy of Music to investigate the (1) extent to which excellence results from natural talent. The researchers divided the school's violinists into three groups. First were the stars – the students with the potential to become world-class soloists. Second were those judged to be "excellent" – those destined to play in top orchestras. Third were the students who were good but unlikely to make a career out of playing professionally. All were then asked the same question: "Since you first picked up the violin, how many hours have you practiced?"

The study revealed that most of the students started playing when they were about 5 and in the early stages practiced roughly the same amount – 2 or 3 hours a week. However, large differences started to emerge around the age of 8. The students who would end up as the best in their class began to devote more time to practice than the others, until by the age of 20 they were practicing well over 30 hours a week. By that age, the elite performers had all totaled 10,000 hours of practice over the course of their lives. The excellent students had totaled 8,000 hours, and the merely good students just over 4,000 hours. The (2) curious thing about the study is that the researchers couldn't find any "naturals" – musicians who could float effortlessly to the top without putting in nearly as much work as their peers did. Neither could they find "grinds", people who worked harder than everyone else and yet just didn't have what it takes to break into the top ranks. The research suggests that if a student has enough natural ability to get into a top music school, the thing that (3) distinguishes one performer from another is simply how hard he or she works.

In fact, this idea – that excellence at a complex task requires a critical, minimum level of practice – surfaces (4) again and again in studies of expertise, and researchers have (5) settled on what they believe is the magic number for true expertise: 10,000 hours. "In study after study, of composers, basketball players, fiction writers, ice-skaters, concert pianists, chess players, master criminals," writes the neurologist Daniel Levitin, "this number comes up. Ten thousand hours is (6) equivalent to roughly three hours a day, or 20 hours a week, of practice over ten years. No one has yet found a case in which true world-class expertise was accomplished in less time."

The same applies to people we think of as prodigies. Mozart, for example, famously started writing music at six. But by the standards of mature composers, Mozart's early works are not outstanding. The earliest pieces were all probably written down by his father, and were

perhaps improved in the process. The earliest piece that is regarded as a masterwork was not composed until Mozart was 21, by which time he had already been composing concertos for ten years.

Ten thousand hours is, of course, an enormous amount of time. It's (7) all but impossible to reach that number all by yourself. You have to have relatives who are encouraging and supportive. You can't be poor, because if you have to do a part-time job to help make ends meet, there won't be enough time left over. In fact, most people can really only reach that number if they get some kind of extraordinary opportunity that gives them a chance to put in the necessary work.

QUESTION 1: *Which two of the following (a. to g.) are true, according to the passage?*

a. The study described in the passage may have been carried out in 1995.
b. Natural talent seems to have nothing to do with a person's ability to achieve excellence.
c. A music school student who has practiced a total of 8,000 hours by the age of 20 is likely to be able to make a decent living out of music.
d. If you don't reach the magic number of 10,000 hours of practice, you will not achieve world-class excellence in your chosen field.
e. The 10,000-hour rule is limited to the field of music.
f. When it comes to the 10,000-hour rule, Mozart should be considered an exception.
g. It's not actually that difficult for most people to get sufficient practice in something to put them at the top of their field.

QUESTION 2: *Which two of the following (a. to g.) are not true, according to the passage?*

a. None of the students in the Berlin study could be regarded as poor musicians.
b. What really distinguishes world-class musicians from merely good ones is the amount of practice they did by the age of 8.
c. The study shows that true excellence stems primarily from natural talent.
d. The study suggests that the amount of practice you do around the age of 5 is not critical to the level of success you achieve later.
e. Natural ability alone is not enough to allow you to get to the very top of your field, whatever that field is.

f. Even though Mozart is considered a prodigy, his childhood compositions lack true genius.

g. To be able to devote enough time to gaining outstanding skill in any field, you need family support, financial resources, and exceptionally good luck.

QUESTION 3: *For each of the underlined expressions marked* (1) *to* (7)*, give one other English word with a similar meaning that could be used instead.*

QUESTION 4: *Change the words "well over" in the underlined clause in paragraph 2 without changing the meaning of the clause. Give one word for each space:*

they were practicing [ ] [ ] [ ] 30 hours a week.

QUESTION 5: *Explain in Japanese what the writer means by* "naturals" *and* "grinds" *in paragraph 2.*