

前期日程試験

京都府立医科大学

平成 24 年度医学科入学試験問題

英 語

〔注意事項〕

- 1 監督者の指示があるまで、この冊子を開いてはいけない。
- 2 解答用紙に受験番号と氏名を必ず記入すること。
- 3 この問題冊子の本文は、14 ページからなっている。落丁、乱丁及び印刷不鮮明な箇所等があれば、手をあげて監督者に知らせなさい。
- 4 この問題冊子の白紙と余白は、適宜下書きに使用してもよい。
- 5 解答は、すべて別紙「解答用紙」の指定された場所に記入すること。
- 6 この問題冊子は持ち帰ること。

**I** Read the passage and answer the questions which follow.

I have used the term *professional artistry* to refer to the kinds of competence practitioners sometimes display in unique, uncertain, and conflicted situations of practice. Note, however, that their artistry is a high-powered, <sup>7</sup>esoteric variant of the more familiar sorts of competence all of us exhibit every day in countless acts of recognition, judgment, and skillful performance. What is striking about both kinds of competence is that they do not depend on our being able to describe what we know how to do or even to entertain in conscious thought the knowledge our actions reveal. As <sup>1</sup>Gilbert Ryle observed, “What distinguishes sensible from silly operations is not their parentage but their procedure, and this holds no less for intellectual than for practical performances. ‘Intelligent’ cannot be defined in terms of ‘intellectual’ or ‘knowing *how*’ in terms of ‘knowing *that*; ‘thinking what I am doing’ does not connote ‘both thinking what to do and doing it.’ When I do something intelligently... I am doing one thing and not two. My performance has a special procedure or manner, not special <sup>2</sup>antecedents” (1949, p.32). For similar reasons, my late friend Raymond M. Hainer spoke of “knowing more than we can say,” and Michael Polanyi, in *The Tacit Dimension* (1967), coined the term *tacit knowledge*.

Polanyi wrote, for example, about the remarkable <sup>±</sup>virtuosity with which we recognize the faces of people we know. He pointed out that, when we notice a familiar face in a crowd, our experience of recognition is immediate. We are usually aware of no antecedent reasoning, no comparison of *this* face with images of other faces held in memory. We simply see the face of the person we know. And if someone should ask us how we do it, distinguishing one particular face from hundreds of others more or less similar to it, we are likely to discover that we cannot say. Usually we cannot construct a list of features particular to *this* face and distinct from the other faces around it; and

even if we could do so, the immediacy of our recognition suggests that it does  
5. not proceed by a listing of features.

Polanyi has also described our ordinary <sup>‡</sup>tactile appreciation of the surfaces of materials. If we are asked what we feel when we explore the surface of a table with our hand, for example, we are <sup>‡</sup>apt to say that the table feels rough, smooth, cool, sticky, or slippery; we are unlikely to say that we feel a certain compression or <sup>‡</sup>abrasion of our fingertips. Nevertheless, it must be from this kind of feeling that we get to our appreciation of the qualities of the table's surface. In Polanyi's words, we perceive *from* fingertip sensations *to* the qualities of the surface. Similarly, when we use a stick to probe, say, a hole in a stone wall, we focus, not on the impressions of the stick on the fingers and palm of our hand, but on the qualities of the hole — its size and shape, the surfaces of the stones around it — which we apprehend through these tacit impressions. To become skillful in the use of a tool is to learn to appreciate, directly and without intermediate reasoning, the qualities of the materials that we apprehend *through* the tacit sensations of the tool in our hand.

Often such processes of recognition or appreciation take the form of normative judgments. In the very act by which we recognize something, we also perceive it as “right” or “wrong.” Chris Alexander (1968) has described how craftsmen recognize the mismatch of an element to an overall pattern — his most famous example is the making of Slovakian peasant <sup>‡</sup>shawls — without the slightest ability or need to describe in words the norms they see as violated. And Geoffrey Vickers (1978), commenting on Alexander's example, has gone on to observe that, not only in artistic judgment but in all our ordinary judgments of the qualities of things, we can recognize and describe deviations from a norm very much more clearly than we can describe the norm itself.

This capacity seems to have a great deal to do with the way we learn new



skills. A tennis teacher of my acquaintance writes, for example, that he always begins by trying to help his students get the feeling of “hitting the ball right.” Once they recognize this feeling, like it, and learn to distinguish it from the various feelings associated with “hitting the ball wrong,” they begin to be able to detect and correct their own errors. But they usually cannot, and need not, describe what the feeling is like or by what means they produce it.

Skilled physicians speak of being able to recognize a particular disease, on occasion, the moment a person <sup>7</sup>afflicted with it walks into their office. The recognition comes immediately and as a whole, and although the physician may later discover in his examination of the patient a full set of reasons for his diagnosis, he is often unable to say just what clues triggered his immediate judgment.

Chester Barnard wrote, in the appendix to *The Functions of the Executive* (1938/1968), about our “non-logical processes,” by which he meant the skillful judgments, decisions, and actions we undertake spontaneously, without being able to state the rules or procedures we follow. A boy who has learned to throw a ball, for example, makes immediate judgments of distance and coordinates them with the bodily movements involved in the act of throwing, although he cannot say how he does so or perhaps even name the distance he estimates. A high school girl who has learned to solve mathematical equations can spontaneously perform a series of operations without being able to give an accurate description of the procedures she follows when she does so. A practiced accountant of Barnard’s acquaintance could “take <sup>8</sup>a balance sheet of considerable complexity and within minutes or even seconds get a significant set of facts from it” (p.306), although he could not describe in words the judgments and calculations that entered into his performance.

In similar fashion, we learn to execute such complex performances as crawling, walking, <sup>9</sup>juggling, or riding a bicycle without being able to give a verbal description even roughly adequate to our actual performance. Indeed, if

we are asked to say how we do such things, we tend to give wrong answers which, if we were to act according to them, would get us into trouble. When people who know how to ride a bicycle are asked, for example, how to keep from falling when the bicycle begins to tilt to their left, some of them say that they regain their balance by turning the wheel to their right. If they actually did so, they would be likely to fall; fortunately, however, the know-how implicit in their actions is incongruent with their description of it.

I shall use *knowing-in-action* to refer to the sorts of know-how we reveal in our intelligent action — publicly observable, physical performances like riding a bicycle and private operations like instant analysis of a balance sheet. In both cases, the knowing is in the action. We reveal it by our spontaneous, skillful execution of the performance; and we are characteristically unable to make it verbally explicit.

Nevertheless, it is sometimes possible, by observing and reflecting on our actions, to make a description of the tacit knowing implicit in them. Our descriptions are of different kinds, depending on our purposes and the languages of description available to us. We may refer, for example, to the sequences of operations and procedures we execute; the clues we observe and the rules we follow; or the values, strategies, and assumptions that make up our “theories” of action.

(Cited from *Educating the Reflective Practitioner* (pp.22-25), by Donald A. Schön)

## Notes

- ア esoteric: likely to be understood or enjoyed by only a few people with a special knowledge or interest
- イ Gilbert Ryle: An English philosopher (1900-1976); in *The Concept of Mind* (1949) he attacks the mind-body dualism of Descartes.
- ウ antecedents: previously existing things
- エ virtuosity: a very high degree of skill in performing or playing
- オ tactile: connected with the sense of touch
- カ apt to: inclined to
- キ abrasion: a damaged area of the skin where it has been rubbed against something hard and rough
- ク shawl: a large piece of fabric worn by a woman around the shoulders or head, or wrapped around her body
- ケ afflicted: to suffer from pain or trouble
- コ a balance sheet: a written statement showing the amount of money and property that a company has and listing what has been received and paid out
- サ juggling: to throw a set of three or more objects such as balls into the air and catch and throw them again quickly, one at a time

## Questions

1. Underlined 1 — Explain in Japanese what “both” refers to here.
2. Underlined 2 — Without changing its meaning, rewrite the sentence in order to make its meaning clear, writing one appropriate English word on each line.

What distinguishes sensible from silly operation \_\_\_\_\_ for  
\_\_\_\_\_ intellectual \_\_\_\_\_ practical performances.

3. Underlined 3 — Choose **one suitable example** from the text which matches the phrase.

4. Underlined 4 — Make clear what is meant by “we cannot say” by completing the following sentence in English.

... we cannot say \_\_\_\_\_.

5. Underlined 5 — Translate the sentence into Japanese, especially by indicating the details which the words in the sentence “so” and “it” refer to.

6. Underlined 6 — What does “tilt” in this sentence mean? Choose the best answer below.

- ① to fall
- ② to lean
- ③ to move
- ④ to stop

7. Underlined 7 — Which can best replace the phrase without changing its meaning? Choose one answer below.

- ① not compatible with
- ② not indifferent to
- ③ not sufficient with
- ④ not sympathetic to

8. Underlined 8 — Explain in Japanese the details of the meaning of the sentence.



II Read the passage below and answer the questions which follow.

**High-tech pays tribute to Eiffel Tower's origins**

Arguably the most widely recognized structure in the world, the Eiffel Tower, was designed to stand for only twenty years — and some predicted it would collapse long before then.<sup>1.</sup> Even as it was being built for the 1889 Universal Exhibition, a professor of mathematics sagely calculated that when the tower was two-thirds complete, the legs would buckle and the whole thing would come tumbling down, crushing workers and houses alike.<sup>3.</sup>

Today, the Eiffel Tower is not only standing but remains in rudder health,<sup>4.</sup> testifying to the soundness of Gustave Eiffel's design and the strength of the "puddle iron," the handmade wrought iron of the late 19<sup>th</sup> century, say engineers. Specialists at the Technical Centre for Mathematical Industries, or CETIM, have put together a high-powered computer model based on the 18,000 pieces that comprise the world's greatest iron edifice and the emblem of Paris. On screen,<sup>5.</sup> the tower has been exposed to hurricane-force winds, lashing rain, extreme heat, cold and thick snow, and each time emerges unbowed, they say.

"We have applied the most demanding test standards currently set in Europe and have found that the tower is in excellent shape," said Stephane Roussin, a former French naval officer in charge of structural safety at Eiffel Tower Operating Company, or SETE, the company that operates the landmark. "We have even doubled its weight to see what happens. The tower moves but<sup>7.</sup> is not destroyed."

SETE commissioned the model in 2008 to fine-tune its maintenance program — to get a better idea of the 324-meter tower's weak and strong points as important projects are carried out. This year, the tower will get its 19<sup>th</sup> coat of paint, and next year will see an overhaul of structures on its first floor. The tower itself weighs around 8,500 tons, of which some 3,000 tons — restaurants, elevators, TV antennas and so on — have been added over the



years.

Computer simulation has become standard practice for contemporary architecture, such as the Petronas Towers in Kuala Lumpur and the Burj Khalifa in Dubai, and for bridges, such as the Millau viaduct in southwestern France. But creating the model for the Eiffel Tower presented a technical challenge of a completely new kind.

One factor was that the realization of its materials — puddle iron (iron that is superheated, beaten by hand and then folded over) and rivets — performs quite differently from modern-day steel, concrete and bolts. “We had to start from scratch,” said Roussin. Materials scientists carried out mechanical and chemical tests on samples of puddle iron to assess its resilience, and stress engineers revisited Eiffel’s own drawings to calculate how the tower would perform facing the natural elements.

Outwardly simple, the geometry of the tower itself posed some mighty number-crunching problems. The program had to take into account a range of weather conditions on a latticework of 18,000 metal pieces and the tower’s additions, calculating the load vertically, horizontally and in 3-D. In all, the model has an astonishing million variables.

The tower has shrunk by some 13 centimeters over the past 120 years because it has settled under its own weight, Roussin says. Looking to the future, the experiments show the tower’s sensitivity to higher temperatures, so global warming is likely to become a bigger source of concern in decades to come. Even so, the specialists say that they are highly confident Paris’ “Old Lady” will be around for the next two or three centuries.

(Cited from: *The Daily Yomiuri* 18<sup>th</sup> of January, 2011)

1. Underlined 1 — What year is being referred to by “then”?
  
2. Underlined 2 — “Even as it was being built...” Which of the below paraphrases best expresses the same meaning of the underlined six words?
  - a) At the same time that it was being built.
  - b) Even though it was being built.
  - c) Simply because it was being built.
  - d) Soon after it was being built.
  
3. Underlined 3 — What is meant by “alike”?
  - a) Both.
  - b) Similar.
  - c) Workers like to crush their own houses.
  - d) Workers usually like their own houses.
  
4. Underlined 4 — What does the “rude” in “rude health” mean?
  - a) Crude.
  - b) Violent.
  - c) Long-lasting.
  - d) Harsh.
  
5. Underlined 5 — What is meant by “screen” here? Write your answer in English.

6. Underlined 6 — “currently set in Europe” — What meaning of “set” is intended here?
- a) Attached.
  - b) Formulated.
  - c) Placed.
  - d) Solidified.
7. Underlined 7 — In your own English words, explain how it was possible to “double” the weight of the Eiffel Tower?
8. Underlined 8 — What specific “natural elements” are spoken of in the passage?
9. Approximately how many tons did the Eiffel Tower weigh originally?
- \_\_\_\_\_ tons.
10. At approximately what rate has the Eiffel Tower shrunk each year since it was built?
- a) 0.1 cm.
  - b) 1 cm.
  - c) 10 cm.
  - d) 13 cm.

**III** Read the following passage and answer the questions which follow.

**It's not all about willpower.**

Do you treat yourself as well as you treat your friends and family? That simple question is the basis for a rather new area of psychological research known as “self-respect”—the study of how people view themselves. People who find it easy to be supportive and understanding of the troubles of other people, it turns out, often score surprisingly low on tests designed to measure self-respect. They often criticize themselves for being overweight or not exercising.

The research suggests that giving ourselves a break and accepting our own personal imperfections may be the first step to better health. People who score high on tests that measure self-respect have less depression, nervousness or anxiety, and tend to be both happier and more optimistic. In fact, preliminary data suggests that self-respect can even influence how much we eat and may help those who desire to lose weight.

The idea does seem at odds with the advice given by many doctors and self-help books, which suggest that will-power, self-discipline, and personal strength are the keys to better health. But Kristin Neff, a pioneer in the field, warns that the idea of self-respect should not be confused with the phrase “too generous to oneself” or lower standards of self-evaluation.

“I found in my research that the biggest reason people lack self-respect is that they are afraid that they might become self-indulgent. They believe, incorrectly, that self-criticism is what maintains continuous obedience. Many Americans believe that being hard on yourself is the proper behavioral model,” Dr. Neff said.

Imagine your reaction to a child struggling with homework or eating too much junk food. Many parents would offer support, like tutoring or making an effort to find healthy foods that the child will enjoy. But when adults find themselves in a similar situation—struggling at work, or overeating and



gaining weight — many fall into a cycle of self-criticism and negativity. That situation often leaves them feeling even less motivated to change.

“Self-respect is really conducive to motivation,” Dr. Neff said. “The reason you don’t let your children eat five big cups of ice cream is because you care about them and love them. With self-respect, if you care about yourself, you will do what’s healthy for you rather than what’s harmful to you.” In a forthcoming book entitled, *Self-Compassion: Stop Beating Yourself Up and Leave Insecurity Behind*, Dr. Neff has developed a “Self-Respect” scale in which 26 statements are designed to determine how often people are kind *to themselves* and whether they recognize that ups and downs are simply part of life.

A positive response to the statement “I’m disapproving and judgmental about my own mistakes and inadequacies,” for example, suggests a lack of self-respect. “When I feel inadequate in some way, I try to remind myself that feelings of inadequacy followed by self-criticism are shared by most people.” Such recognition helps us to understand that feelings of inadequacy and blaming oneself first are pretty universal.

For those low on the scale, Dr. Neff suggests a set of exercises — like writing yourself a letter of support, just as you might write to a good friend whose depression you are worried about. In such a letter to yourself, you might remind yourself that nobody is perfect and you then think of steps you might take to feel better about yourself. Other exercises include meditation and “respect breaks,” which may involve repeating to yourself, “I’m going to be kind to myself in this moment.” The difficulty is that we are so unaccustomed to taking ourselves as an object of even temporary sympathy that such kindness to ourselves may seem selfish.

Even a minor self-respect intervention is useful in influencing behavior. As part of Dr. Neff’s study, 84 female college students were asked to take part in what they had thought was a food-tasting experiment. At the beginning of the study, the women were asked to eat doughnuts, a very fattening and

unhealthy food. One group, however, was given a lesson in self-respect with the food. “I hope that you won’t be hard on yourself,” the instructor said. “Everyone in the study eats this stuff, so I don’t think there is any reason to feel bad about eating it.”

Later, the same women were asked to taste-test candy from large bowls. The researchers found that the women ate less unhealthy foods after hearing the instructor’s reassuring words, but that those who were not given that message ate more. The hypothesis is that the women who felt bad about eating the doughnuts engaged in “emotional eating,” which means that they ate more because they felt “bad about” or “guilty about” eating unhealthy food. In other words, these women in the study who were given reassurance gave themselves permission to enjoy the candy, but they didn’t overeat. Although most diet programs emphasize self-discipline and controlling the amount you eat, Dr. Neff suggests that self-respect, going a bit easy on ourselves, is crucial to any successful diet and weight-loss program.

(Adapted from: The *International Herald Tribune*, 5<sup>th</sup> of May, 2011)

## QUESTIONS

According to the content of the passage, write T for True, F for False or N for Not mentioned in the text for each statement. Answer a question with “N” only if the statement is either not present in the text or cannot be inferred from the information from the text.

1. The new field known as the study of “self-respect” is concerned with how individuals interact with others.
2. People who are most generous and sympathetic to the problems of others often score quite low on newly designed tests to measure self-respect.

3. Many self-help books as well as many health-care professionals have historically recommended discipline and self-criticism as crucial to the maintenance of health.
4. Many Americans often confuse self-respect with selfishness or indulgence and often are “too hard” on themselves.
5. Most parents do not discipline their children when they eat large amounts of doughnuts and candy.
6. In the test of 84 female college students, there were different results depending upon whether the women in the study ate doughnuts or candy.

**IV** Answer the following question in English.

According to a newspaper survey, Japan’s average dependency rate on nuclear power is about 30 percent of the total electricity generated. However, the Japanese national government has announced that it has decided to move away from nuclear-power plants for electricity generation. What do you think of this policy change? First of all, state if you are “*For*” or “*Against*” this policy, and then write logically your view about using less nuclear power in about 150 words.