

京都府立医科大学

前期日程試験

平成 26 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、16 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 below and answer the questions which follow.

People have long been concerned about coming to grips with their environment and about understanding the nature of the phenomena it presents to their senses. The means by which they set out to achieve these ends may be classified into three broad categories: *experience*, *reasoning* and *research*. Far from being independent and mutually exclusive, however, these categories must be seen as complementary and overlapping. These are features most readily in evidence where solutions to complex problems are sought.

In our endeavours to come to terms with the problems of day-to-day living, we are heavily dependent upon experience and authority. However, as tools for uncovering ultimate truth they have definite limitations. The limitations of personal experience in the form of *common-sense knowing*, for instance, can quickly be exposed when compared with features of the scientific approach to problem-solving. Consider, for example, the striking differences in the way in which theories are used. Laypeople base them on haphazard events and use them in a loose and uncritical manner. When they are required to test them, they do so in a selective fashion, often choosing only that evidence that is consistent with their initial guesses and ignoring that which is counter to them. Scientists, by contrast, construct their theories carefully and systematically. Whatever hypotheses they formulate have to be tested empirically so that their explanations have a firm basis in fact. There is also the concept of *control*, distinguishing between laypeople's and scientists' attitudes to experience. Laypeople may make little or no attempt to control any irrelevant sources of influence when trying to explain an occurrence. Scientists, on the other hand, only too conscious of the multiplicity of causes for a given occurrence, resort to specific techniques and procedures to isolate and test the effect of one or more of the alleged causes. Finally, there is the difference of attitude to the relationships among phenomena. Laypeople's concerns with such relationships

may be loose, unsystematic and uncontrolled. The chance occurrence of two events in close proximity is sufficient reason to predicate a causal link between them. Scientists, however, display a much more serious professional concern with relationships and only as a result of rigorous experimentation and testing will they postulate a relationship between two phenomena.

People attempt to comprehend the world around them by using three types of reasoning: *deductive reasoning*, *inductive reasoning* and the *combined inductive-deductive* approach. Deductive reasoning is based on the syllogism which was Aristotle's great contribution to formal logic. In its simplest form the syllogism consists of a major premise based on an *a priori* or self-evident proposition, a minor premise providing a particular instance, and a conclusion. Thus:

All planets orbit the sun;

The earth is a planet;

Therefore () () () () ().

The assumption underlying the syllogism is that through a sequence of formal steps of logic, from the general to the particular, a valid conclusion can be deduced from a valid premise. Its chief limitation is that it can handle only certain kinds of statements. The syllogism formed the basis of systematic reasoning from the time of its formal beginning until the Renaissance. Thereafter its effectiveness was diminished because it was no longer related to observation and experience and became merely a mental exercise. One of the consequences of this was that empirical evidence as the basis of proof was superseded by authority and the more authorities one could quote, the stronger one's position became. Naturally, with such abuse of its principal tool, science became sterile.

The history of reasoning was to undergo a dramatic change in the 1600s when Francis Bacon began to lay increasing stress on the observational basis of science. Being critical of the model of deductive reasoning on the grounds that its major premises were often preconceived notions which inevitably biased the conclusions, he proposed in its place the method of inductive reasoning by means of which the study of a number of individual cases would lead to a hypothesis and eventually to a generalization. It can be explained by suggesting that Bacon's basic premise was that, with sufficient data, even if one does not have a preconceived idea of their significance or meaning, nevertheless important relationships and laws would be discovered by the alert observer. Bacon's major contribution to science was thus that he was able to rescue it from the dominance of the deductive method whose abuse had stopped scientific progress. He thus directed the attention of scientists to nature for solutions to people's problems, demanding empirical evidence for verification. Logic and authority in themselves were no longer regarded as conclusive means of proof and instead became sources of hypotheses about the world and its phenomena.

Bacon's inductive method was eventually followed by the inductive-deductive approach which combines Aristotelian deduction with Baconian induction. Here the researcher is involved in a back-and-forth process of induction and deduction. Hypotheses are tested rigorously and, if necessary, revised.

Although both deduction and induction have their weaknesses, their contributions to the development of science are enormous, for example: (1) the suggestion of hypotheses; (2) the logical development of these hypotheses; and (3) the clarification and interpretation of scientific findings and their synthesis into a conceptual framework.

A further means by which we set out to discover truth is *research*. This has been defined as the systematic, controlled, empirical and critical

investigation of hypothetical propositions about the presumed relations among natural phenomena. Research has three characteristics in particular which distinguish it from the first means of problem-solving identified earlier, namely, experience. First, whereas experience deals with events occurring in a haphazard manner, research is systematic and controlled, basing its operations on the inductive-deductive model outlined above. Second, research is empirical. The scientist turns to experience for validation. Subjective, personal belief has to have a reality check against objective, empirical facts and tests. Third, research is self-correcting. Not only does the scientific method have built-in mechanisms to protect scientists from error as far as is humanly possible, but also their procedures and results are open to public scrutiny by fellow professionals. Incorrect results in time will be found and either revised or discarded. Research is a combination of both experience and reasoning and must be regarded as the most successful approach to the discovery of truth, particularly as far as the natural sciences are concerned.

Since the ground-breaking work of Kuhn (1962), approaches to methodology in research have been seen to reside in 'paradigms' and communities of scholars. A paradigm is a way of looking at or researching phenomena, a world view, a view of what counts as accepted or correct scientific knowledge or way of working, an 'accepted model or pattern' (Kuhn, 1962: 23), a shared belief system or set of principles, the identity of a research community, a way of pursuing knowledge, consensus on what problems are to be investigated and how to investigate them, typical solutions to problems, and an understanding that is more acceptable than its rivals. A notable example of this is the old paradigm that placed the earth at the centre of the universe, only to be replaced by the Copernican heliocentric model as evidence and explanation became more persuasive of the new paradigm. Importantly, one has to note that the old orthodoxy retained its value for generations because it was supported by respected and powerful scientists and, indeed, others

(witness the attempts made by the Catholic Church to silence Galileo in his advocacy of the heliocentric model of the universe). More recently the Newtonian view of the mechanical universe has been replaced by the Einsteinian view of a relativistic, evolving universe.

Post-positivists argue, however, that facts and observations may already contain theories and social values without being aware of them. Hence facts and observations are fallible.⁹ Different theories may support specific observations/facts, and social facts, even ways of thinking and observing, may be social constructions rather than statements which are objectively and universally true.

At issue here is the significance of regarding approaches to research as underpinned by different paradigms, an important characteristic of which is their incommensurability with each other (i.e., one cannot hold two distinct paradigms simultaneously as there is no common asset of principles, standards or measures).

As more knowledge is acquired to challenge an existing paradigm,¹⁰ such that the original paradigm cannot explain a phenomenon as well as the new paradigm, there comes about a 'scientific revolution', a paradigm shift, in which the new paradigm replaces the old as the orthodoxy — the 'normal science' — of the day. Kuhn's (1962) notions of paradigms and paradigm shifts link here objects of study and communities of scholars, where the field of knowledge or paradigm is seen to be only as good as the evidence and the respect in which it is held by 'authorities'.

(Adapted from: *Research Methods in Education* (7th edition) by Cohen, L., Manion, L. & Morrison, K. Routledge. pp. 3-5)

QUESTIONS

1. Underlined 1: Choose the item which has the closest meaning to the underlined word. Write the LETTER of your answer.

(A) fragments

(B) goals

(C) intentions

(D) limits

(E) stages

2. Underlined 2: Translate the part into Japanese.

3. Underlined 3: Translate the part into Japanese.

4. Underlined 4: Find ONE WORD in the paragraph whose meaning is approximately the same as the underlined part.

5. Underlined 5: How many pairs of “striking differences” does the author give in the passage?

6. Underlined 6: Explain the underlined part in Japanese especially by making it clear what “they” and “so” refer to.

7. Underlined 7: Fill in the blanks with one word each to make sense of the part according to the logic of the passage.

Therefore () () () () ().

8. Underlined 8: Why does the author say in the underlined part that the example here is regarded as being “notable”? Explain it in Japanese based on inferences from the information in the passage.
9. Underlined 9: Why is it possible to say that “facts and observations are fallible” here? Explain it in Japanese according to the logic of the passage.
10. Underlined 10: Find ONE WORD in the passage whose meaning is approximately the same as the underlined part.

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

Reindeer are almost mythical creatures. They are associated with Santa Claus and sleighs, with the idea of a Scandinavian icy white Christmas that is far more magical than the reality we normally experience in warmish, wettish Britain. But for me there is also something very special about reindeer because they are survivors from the ice age, clinging on when so many other magnificent large mammals died out at the end of the Pleistocene period, through climate change or human hand⁽¹⁾ or a bit of both. They are animals that were important to our ancestors, and animals that are still revered by the Siberian tribes that have a long history of hunting and herding them.

I first visited the icy north of Siberia five years ago while making a BBC documentary about ancient human migrations. We were filming with indigenous Siberians of the Evenki tribe, and staying in a remote reindeer-herders camp — living in tents that were kept warm with larch stoves while it was a bone-chilling minus 40 degrees Celsius outside. (The stoves went out overnight, and in the morning I would wake up to find my eyelashes stuck together with ice.)

There were reindeer all around us in the snowy, sparse larch forest. At night, they came in, walking cautiously around our tents, the thick fur behind their large hooves muffling their footsteps. One morning I wandered off into the forest to answer a call of nature. A single pure-white reindeer followed me. I wandered further and further, with the reindeer following me a few paces behind. It felt as though I had made some kind of connection with this beautiful, unearthly creature. After I had done what I'd come for, I started to make my way back to camp, and wondered if the reindeer would follow me back to camp. He didn't. Instead, he started eagerly eating the yellow snow I had created. The mystical moment was shattered. He wanted nothing more than the salt from my urine. Later I discovered that this apparently common

behavior was enshrined in a Siberian myth about the domestication of the first reindeer by a woman who went to urinate at night and managed to catch and tame a reindeer who, like mine, had been after the yellow snow.

Long before humans domesticated reindeer, though, they hunted them, and reindeer-hunting was part of the reason our ancestors were able to colonize the far north. We know that, 30,000 years ago, modern humans — Homo sapiens like us — were living right up on the coast of the Arctic ocean. At one Arctic site, archaeologists have found ivory and horn spear-ends, stone tools and huge quantities of butchered animal bones, most of them reindeer. Those hardy hunters were surviving in extreme conditions: the average temperature in Siberia back then was even colder than it is today.

We can only assume that those ancient Siberians made good use of reindeer fur in the same way that the modern Evenki do, to make clothes and boots. They would have been silly not to. I was given a pair of Evenki reindeer boots, and they are far warmer than the felt-lined expedition boots I had. The thermal properties of reindeer fur are legendary: it has a thick felty layer of underwool and long thick guard hairs that appear to be hollow, but on inspection under a microscope each hair turns out to have a core of air-filled cells.

Our European ancestors painted a great range of animals in their cave-cathedrals, but there is no doubt that they were particularly partial to reindeer. In some southwestern French sites, 99 percent of the animal remains are from reindeer; this preference for reindeer seems to distinguish our own ancestors from those other ancient inhabitants of Europe, the Neanderthals.

As for what reindeer like to eat, you might think it was reindeer moss. But that would be a mistake — reindeer moss is in fact lichen^{*(2)}. And while reindeer eat plenty of it in the winter months, digging through the snow with their broad feet to get at it, I expect that they are happy when the summer arrives and there are far more juicy and delicious plants to eat.

The end of the ice age saw a massive global extinction: many large mammals fell prey to changing climate and the effect of some rather formidable hunters sharing their landscape. There was a decline in the genetic diversity of reindeer after the peak of the last ice age 20,000 years ago — probably due to a warming climate as well as those Stone Age hunters — but reindeer survived, and thankfully they don't look likely to become extinct any time soon.

I think our ancestors appreciated reindeer as beautiful creatures, as well as a source of food. The hunter-herders of Siberia still revere the wild reindeer, and give them sky burials on platforms in trees after hunting, killing and butchering them.

(Adapted from: “Rudolph and our early ancestors — a love story” in *The Japan Times* on 29th December 2012.)

Notes:

- * (1) As a result of the actions, either intentional or unintentional, of humans.
- * (2) A very small grey or yellow plant that spreads over the surface of rocks, walls and trees and does not have any flowers.

QUESTIONS

1. Underlined 1: The passage begins by remarking that reindeer “are associated with Santa Claus and sleighs.” Exactly how are they associated? Explain in English.
2. Underlined 2: The reindeer are said to be ‘clinging on.’ What are they exactly clinging on to? Write your answer in English.
3. Underlined 3: The author and her group were “filming with indigenous Siberians.” Complete the following paraphrase of “indigenous” by writing one English word in each blank.
Siberians who are () () Siberia....
4. Underlined 4: “After I had done what I’d come for, ...” What had she come for? Write your answer in English.
5. Underlined 5: Complete the following summary of the author’s feelings by putting one English word in each blank.
The author thought that the reindeer had been attracted by (), but really it had been attracted by () ().
6. Underlined 6: Complete the sentence in English.
They would have been silly not to _____.
7. Complete the sentence with one English word.
The author believes that reindeer moss is not () enough to completely satisfy reindeer.
8. Underlined 7: Explain in English what the author means by “sky burials.”

III

Read the following passage and answer the questions which follow.

Romantic Love

Romantic love is widely celebrated as the highest form of love. It is marketed as the peak experience without which you cannot say you have lived. The signs of its attraction are everywhere, not just on Valentine's Day. Take the cost of the average wedding. It has rocketed in recent years, now easily topping £20,000 in the UK. It is as if couples make a direct link between romantic value and cash value. Or think of the cinema, where romantic comedies are big box office hits. If a movie producer gets the formula right, and the on-screen lovers can be together in the end, the movie earns hundreds of millions of pounds. Or again, there are the dating websites that are recession-proof — 60% growth in spending last year, according to reports.

Love is blind, the proverb goes, though it might be more accurate to say that we are being blinded by a hyper version of romantic love, and are missing parts of our life as a result. In short, I think that the romantic myth is one of the most dangerous of our times. The myth is that there is someone out there with whom your life will be complete, and conversely, without whom your life would be a half-life. A major task of modern life is, therefore, to find this person and, falling in love, to cease to be two and become one. It is hard to prove, though I wonder whether such a view of romance has become so monstrous in the pressure it puts on couples to find fulfilment in each other, that it actually undermines relationships rather than supports them. It is socially destructive because it idealises love, rather than understanding that love is made and not found. Getting through good times and bad times with someone who has as many problems as you do makes love.

The power of the myth is demonstrated in the fact that most people would say that they don't believe it. They would protest that such a story shapes the plots of romantic novels and movies, and the advertising of online dating sites,

but is not real life. Despite this, is it not precisely this dream that drives so many to glossy magazines, to cinemas and online dating sites? It is telling that the top question asked of Google last year was: What is love? Harmful myths are at their most powerful when we presume that they do not affect us.

Such romance might be, in part, a driver of divorce figures. It is striking that remarriages appear to work best when they have outgrown hyperromance. A recent review study listed three top factors making for a successful marriage — couple consensus, social support, and financial stability. These couples, perhaps having learnt the hard way, are now able to talk rationally about their difficulties, rely on the love of family and friends as well as of their partner, and feel materially stable, not swept away by love. If romance first draws the eye, relationships have a chance to thrive when it does not seal the deal.

More darkly, have you ever wondered why romance is so closely associated with death? Think of the play “Romeo and Juliet”. It appears to teach that it is better to marry in haste, without thought, because that is what it means to be passionate and to be authentic. However, note that when Shakespeare told the story he called it a tragedy. He saw a deeper truth in what happened, namely that a tragedy arises when the destructive action of romance seizes young lovers’ hearts.

There are signs that individuals are rejecting the romantic myth. The number of people living on their own has risen by 50% since the mid-1990s. Many report that remaining single means they enjoy more freedom and have time for other relationships, like friendship. It is as if these individuals are bearing witness to the oppression of the exclusive pair that meets freedom and friendship with powerful feelings of jealousy and suspicion.

So why has romance become so distorting? I suspect that the desire for a peak experience of love has eclipsed the fact that love is primarily about others. The romantic myth would have us fall in love with love, paradoxically

not with another. This extreme love whispers that it does not much matter with whom you fall in love, but it matters only that you fall in love. There is a spiritual dimension to this romantic addiction, too. The philosopher Simon May has proposed that while many in the West no longer believe in God, we still long for the unconditional love that God used to offer. But, not knowing God's love, we seek from our fellow humans the unconditional love we once received from God. We make them gods, and of course they fail us. Then love turns to hate. It's a desire that destroys love because of its very excess. People kill the thing they love.

The true art of loving is to navigate the shift from falling in love to "standing in love", according to the psychologist Erich Fromm. Falling in love, the stuff of romance, is the intoxicating sense of possessing someone and/or being possessed. It just can't last, because possessiveness crushes liveliness. The risk is that you then feel that love has died because, following the romantic myth, you measure love by its felt intensity. "Standing in love", though, is the capacity to be with someone and be free with someone. It too feels good, though for different reasons. It can allow more subtle qualities to develop, such as commitment and generosity, honesty and openness. It welcomes life. "Standing in love" is, perhaps, a healing notion as we face the romantic attack of another Valentine's Day.

(Adapted from: "Viewpoint: Down with romantic love" in *The BBC News Magazine* on 13th February 2013.)

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 in the text.

1. The passage states that romantic love is only acknowledged on Valentine’s Day.
2. Families and friends may facilitate a couple’s successful relationship.
3. Shakespeare considered “Romeo and Juliet” a romance.
4. Romeo and Juliet were “standing in love”.
5. A romantic couple is likely to have positive reactions to friendship with other people.
6. A philosopher has advanced the idea that a romantic myth of unconditional love is a substitute for a declining belief in God’s unconditional love.
7. The author has experienced “standing in love”.

IV Read the following lines. Then respond in about 150 English words as directed by the instructions which follow.

The Japanese government estimates that, by the year 2040, the country will face a severe economic crisis as the result of a rapidly aging population and a rapidly declining birthrate. One proposal to remedy the crisis has a two-fold solution: not only would the retirement age be raised, but also the pension benefit per person would be greatly reduced. What do you think of this proposal?

First of all, state if you are "*For*" or "*Against*" this proposal, and then logically explain the reasons for your opinion. Give two or three examples in support of your opinion.