平成21年度前期日程入学試験学力検査問題

平成21年2月25日

外　国　語(英語)

志望学部	試　験　科　目	試　験　時　間
経済学部，理学部，医学部保健学科，歯学部，薬学部，工学部	英語	10：00～11：40 (100分)
文学部，教育学部，法学部，医学部医学科，農学部	英語，ドイツ語，フランス語のうちから1科目選択	

・ドイツ語，フランス語の問題冊子は，出願時に，それぞれの科目を希望した者に配付します。

注　意　事　項

1. **試験開始の合図があるまで，この問題冊子，解答用紙を開いてはいけない。**
2. この問題冊子は，14ページである。問題冊子の白紙のページや問題の余白は草案のために使用してよい。なお，ページの脱落，印刷不鮮明の箇所などがあった場合には申し出ること。
3. 解答は，必ず**黒鉛筆**(シャープペンシルも可)で記入し，ボールペン・万年筆などを使用してはいけない。
4. **解答用紙の受験記号番号欄(1枚につき2か所)には，忘れずに受験票と同じ受験記号番号をはっきりと判読できるように記入すること。**
5. 解答は，必ず**解答用紙の指定された箇所**に記入すること。
6. **解答用紙を持ち帰ってはいけない。**
7. 試験終了後，この問題冊子は持ち帰ること。

◇M4(685—27)

英　　語

I 次の英文を読み，下の問いに答えなさい。

Music has been missing from our history. Generations of students and their teachers have viewed the past (A)as if it had been silent. We have read the documents, the words of the people who created that history, and we have looked at their pictures, but we have not heard the sounds through which they shaped their culture.

In the late twentieth century, educators and publishers successfully placed original written sources (such as historic documents, and literary works) as well as visual ones (art works, photographs) in textbooks to stimulate students' imaginations and to help them understand earlier cultures through closer familiarity with diverse forms of expression at specific points in history. What has been missing from this mix, however, is one of the most widely used and appealing forms of communication: music, and songs in particular. Still, there have been many difficulties. For publishers of hardcover textbooks, music *notation and sound recordings present obvious challenges; teachers not trained in music may be uneasy trying to explain it; and historians who are used to extracting messages from written documents may feel that the messages in music are subtle and unclear. Many educators have seen music as an interference from the substantive factual materials and concepts to be learned in the history classroom.

(B)And yet some teachers have found their own ways of using music in their history courses because they know that music is a mirror of society's events and systems of beliefs, and that each piece can be a richly packed time capsule from its period. Those teachers have developed their own methods, since using music as source materials is not a part of the course training offered by schools of education. Why not make music available to all teachers?

In the twenty-first century some publishers have begun packaging music CDs into their textbooks on American history. Even so, the music is not fully

integrated into the narrative. Nor do the editors seem to understand fully how music can be used to evoke history for students.

The analytical techniques of *anthropologists and *musicologists help us understand how music works as an element of culture. People initiate musical events — i.e., they compose, perform, or listen — for many different reasons, which we can call "uses". The most common use of music is for play or entertainment, which humans of all ages engage in to stimulate feelings of joy, tension, and interaction, and enrich their experiences by adding mental complexity, thereby resisting boredom and sleepiness. A related use of music is as a social activity: performing music in a group provides both practice for social life and a rewarding means of both physical and aural interaction with other performers; likewise, music can simultaneously serve as a physical stimulus and regulator for group activity such as dancing and singing along.

The use of music in communication gives rise to its most important values for teaching history. Lyrics are usually carefully matched to the song's compositional style to deepen the meanings of the words themselves. Music, of course, is commonly used to express emotions such as love, sentiment, or anger. Adults use songs to entertain children, or put them to bed. Music in advertising and films is used to communicate feelings even when the audience is unaware of its purpose. And in many types of events — particularly in ritual or formal ceremonies — music is used to signal the beginning, the end, and important moments or points of transition from one part of the event to another.

Particularly in pre-electronic media culture, music was a means of spreading information, as, for example, through songs about elections, natural disasters, wrecked ships, and other current events. But especially for topics rich in controversy, music is still often used as "an acceptable channel of communication in a situation where open criticism or complaint would be unacceptable". (C) Songs that stress particular points of view, or that allow performers to make personal though public comments, or that serve to rally supporters around a common

interest, can strengthen a group's identity and draw its boundaries with other groups. In this way, ethnic groups often use music to communicate what is distinctive about themselves, but so do nations and states, political parties, age groups, and social classes.

注　*notation　音楽を楽譜の形で表すこと，またその方法
　　*anthropologist　人類学者
　　*musicologist　音楽学者

問 1　下線部(A)について，筆者がこのように考えた理由を日本語で具体的に説明しなさい。

問 2　下線部(B)，(C)を日本語に訳しなさい。

問 3　下の(1)～(10)から，本文の内容と合致しないものを 3 つ選び，番号で答えなさい。

(1) Children are often put to sleep by listening to music.
(2) Better citizens can be made through the intentional use of music.
(3) Groups can express their distinctiveness through music.
(4) Music serves as a channel of complaint.
(5) Through music, people can increase their fame.
(6) People engage in interactions through musical performance.
(7) Important moments in ceremonies are announced by music.
(8) Music precedes important announcements in stores.
(9) Feelings can be communicated through music.
(10) Humans enrich their entertainment activities via music.

Ⅱ　次の英文を読み，下の問いに答えなさい。

Today, the laws of physics occupy the central position in science. Let me give an everyday example. If you go to Pisa in Italy, you can see the famous leaning tower. Tradition says that Galileo dropped balls from the top of the tower to demonstrate how they fall under *gravity. (A) Whether or not this is true, he certainly did carry out some careful experiments with falling bodies, which is how he came to discover the following law. If you drop a ball from the top of a tall building and measure how far it falls in one second, then repeat the experiment for two seconds, three seconds, and so on, you will find that the distance the ball travels increases as the *square* of the time. The ball will fall four times as far in two seconds as in one, nine times as far in three seconds, and so on. Schoolchildren learn about this law as 'a fact of nature', and normally move on without giving it much further thought. But I want to stop right there and ask the question, *why?* Why is there such a mathematical rule at work on falling bodies? Where does the rule come from? And why that rule and not some other?

Some laws of physics bear the name of their discoverer, such as Boyle's law for gases and Kepler's laws of planetary motion. Perhaps the best-known laws are Newton's laws of motion and gravitation, the latter supposedly inspired by an apple falling from a tree. It states that the force of gravity diminishes with distance as the *square* of the separation between the two bodies. That is, (B) the force that binds the Earth to the sun, and prevents it from flying off alone across the galaxy, would fall to only one-quarter the strength if the Earth's orbit were twice as big. This is known as an 'inverse square law'.

The fact that the physical world conforms to mathematical laws led Galileo to make a famous remark. 'The great book of nature', he wrote, 'can be read only by those who know the language in which it was written. And this language is mathematics.' (C) It is the mathematical aspect that makes possible what

physicists mean by the word 'theory'. Theoretical physics entails writing down *equations that capture (or 'model', as scientists say) the real world of experience in a mathematical world of numbers and *algebraic formulas. Then, by handling the mathematical symbols with skill, one can work out what will happen in the real world, without actually carrying out the observation. That is, by applying the equations that express the laws relevant to the problem of interest, the theoretical physicist can predict the answer. For example, by using Newton's laws of motion and gravitation, engineers can figure out when a spacecraft launched from Earth will reach Mars. They can also calculate the required mass of fuel, the most suitable orbit, and a host of other factors, in advance of the mission. And it works! The mathematical model faithfully describes what actually happens in the real world.

When I was at school I took a fancy to a young lady in my class named Lindsay. I didn't see much of her because she was studying mainly arts subjects and I was studying the sciences and mathematics. But we did meet up in the school library from time to time. On one occasion I was busy doing a calculation. I even remember what it was. If you throw a ball in the air at a certain speed and angle, Newton's laws let you (①) out how far it will travel before it hits the ground. The equations tell you that to achieve maximum range you should throw the ball at 45° to the horizontal. If the ground on which you are standing slopes upwards, however, the angle needs to be greater; by how much depends on the amount of slope. I was deeply absorbed in (②) the maximum range up an *inclined plane when Lindsay looked up and asked what I was doing. I explained. She seemed (③) and doubtful. 'How can you possibly know what a ball will do by writing things on a sheet of paper?' she asked. At the time I (④) her question as silly — after all, this was what we had been taught to do! But over the years I came to see that her *impulsive response precisely captures one of the deepest mysteries of science: *Why* is nature shadowed by a mathematical (⑤)? Why does theoretical physics work?

注　*gravity　重　力
*equation　方程式
*algebraic　代数の
*inclined　傾斜した
*impulsive　衝動的

問 1　下線部(A), (B)を日本語に訳しなさい。

問 2　下線部(C)の内容を本文に即して日本語で説明しなさい。

問 3　本文中の空欄①～⑤に入れるのに最も適切な語を，下の(ア)～(ク)から選び，記号で答えなさい。ただし，同じ語を重複して選んではいけません。

(ア) puzzled	(イ) applying	(ウ) reality	(エ) move
(オ) dismissed	(カ) dream	(キ) calculating	(ク) work

Ⅲ　次の英文は，幼い女の子が，ある植物のとげに初めて触れたときの様子を述べたものである。これを読み，下の問いに答えなさい。

My little daughter, Ada, did not encounter stinging nettles until we returned to England from America when she was nearly four years old. We were in the fields near Cambridge. I pointed out a nettle to her, and warned her not to touch it. But, to reassure her, I told her about dock leaves: 'If you get stung,' I said, 'then we'll rub the bad place with a dock leaf and it will very soon be better.'

Ten minutes later Ada had taken her shoes and socks off and had walked into a nettle patch. 'Daddy, daddy, it hurts. (　ア　)' 'It's all right, we'll find a dock leaf.' I made a show of looking for a dock leaf. But then — in the interests of science — I played a trick.

'Oh dear, I can't see a dock leaf anywhere. But here's a dandelion leaf,' I said, picking a dock leaf. 'I wonder if that will work. (　イ　) Dandelion's aren't the same as dock leaves. They just aren't so magic.'

Ada's foot had come up with a nasty rash. I rubbed it with the dock leaf which Ada thought to be a dandelion. 'Ow, Daddy, it's no better, it still hurts. It's getting worse.' (　ウ　)

'Let's see if we can't find a proper dock leaf.' (　エ　) 'Ah, here's just what we need,' I said, picking a dandelion leaf. 'This should work.'

I rubbed Ada's foot again with the dandelion leaf which she now believed to be a dock. 'How's it feel now?' 'Well, I don't know.' 'But, look, the rash is going away,' I said — as indeed it was. She said, '(　オ　)' And within a couple of minutes there was nothing left to show.

So, dock-leaf magic clearly works. And yet dock-leaf magic is **placebo* magic. Dock leaves, as such, have no medically relevant properties (any more than do (　A　) leaves). Their power to heal depends on nothing other than the reputation they have acquired over the centuries — a reputation based, so far as I can gather, simply on the grounds that their old English name, *docce*, sounds

like the Latin *doctor*, hence *doctor leaf*, and also, luckily, that they happen to grow alongside (　B　).

But father magic clearly works too. Ada, after all, simply took my word for it that what was needed was a (　C　) leaf. And very likely if I had merely blown her foot a kiss or said special words it would have worked just as well. Maybe father magic is also a placebo.

注　*placebo　偽　薬

問 1　本文中の空欄(　ア　)～(　オ　)に入れるのに最も適切な文を，下の(1)～(5)から選び，番号で答えなさい。ただし，同じものを重複して選んではいけません。

(1) It does feel better.
(2) Please, do something.
(3) Her skin looked as bad as ever.
(4) And we looked some more.
(5) I'm afraid it probably won't.

問 2　本文中の空欄(　A　)～(　C　)に入れるのに最も適切な単語一語を，本文中から選び，答えなさい。

Ⅳ　次の文章を読み，下線部(A)，(B)を英語に訳しなさい。

(A)アメリカはどこまで行っても同じ建物，同じ町並み，同じ料理で面白くない，アメリカ文化は画一的だ，という意見をよく聞かされる。しかしそういう人は，たぶん飛行機にばかり乗って旅行しているのではあるまいか。空港からタクシーやリムジンが送りとどけてくれる一流ホテルに泊り，一流レストランで食べ，表通りばかり見物していれば，全国画一的に見えるのは当たり前である。日本でもその点は同じだろう。ただ私たちは，日本については画一的でない裏街の日常生活も知っているだけなのだ。

私は徹底してバス旅行の徒である。(B)これには経済的な理由も大きい。自分で車を運転する人は別として，バスはアメリカで一番安い乗り物なのである。しかし長距離を行く時など，途中の宿泊費を含めればバスのほうが高くつくこともある。それでも，時間さえ許せば私はバスを選ぶ。バスで旅すると，ひとつひとつの土地や人間や風俗の変化がよくわかる。変化しない場合でも，その変化しないことが意味をもってわかってくる。

（亀井俊介『アメリカの心　日本の心』より）