東北大学　　医学部　歯学部

平成31年度前期日程入学試験学力検査問題

平成31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，農学部	英語	10：00～11：40 (100分)
文学部，教育学部，法学部，医学部医学科	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，18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(127—29)

I 次の英文を読み，下の問いに答えなさい。

Remember what you were taught about the right way to make important decisions? You were probably told to analyze a problem thoroughly, list all your different options, evaluate those options based on a common set of criteria, figure out how important each criterion is, rate each option on each criterion, do the math, and compare the options against each other to see which of your options best fit your needs. The decision was simply a matter of selecting the option with the highest score.

This is the classical model of decision making, and there is something very appealing and reassuring about it. It is based not on whims or hunches, but on solid analysis and logic. It is methodical rather than *haphazard. It guarantees that you won't miss anything important. It leaves nothing to chance. It promises you a good decision if you follow the process properly. It allows you to justify your decision to others. There is something scientific about it.

The whole thing sounds very comforting. Who would not want to be thorough, systematic, rational, and scientific?

The only problem is that the whole thing is a myth. (A) The reality is that the classical model of decision making doesn't work very well in practice. It works tolerably well in the research labs which use undergraduate test subjects making trivial decisions, but it doesn't do so well in the real world, where decisions are more challenging, situations are more confusing and complex, information is scarce or inconclusive, time is short, and *stakes are high. And in that environment, the classical, analytical model of decision making falls flat.

That's why people rarely use the classical model — even though they may say they believe in it. And I think the truth is that deep down we all know this. Practically anybody who has even limited experience making tough decisions, in practically any field, realizes that formal analytical decision making doesn't work very well in practice. Most real-life decisions are simply not subject to this

approach. Even when we try to keep an open mind and consider several options, we usually know from the beginning which option we really prefer, so the whole process becomes nothing more than comparing what we know we want to two or three other made-up distracters.

So how *do* we make decisions? Well, largely through a process based on intuition. Think about the times when you had a sense about something, even though you couldn't quite explain it. *Can a junior staff member handle a tough project?* (B) You can't imagine it working out without some disaster. Better give the job to someone else. *Why is a customer late with a payment?* You have a hunch that the customer may be having a cash flow problem. *Is a contract going well?* The reports and expenditure rates look fine but you aren't picking up any signs of excitement from the project team. Maybe you should look more deeply into it.

What is it that sets off these alarm bells inside your head? It's your intuition, built up through repeated experiences that you have unconsciously linked together to form a pattern.

A "pattern" is a set of cues that usually chunk together so that if you see a few of the cues you can expect to find the others. When you notice a pattern you may have a sense of familiarity — yes, I've seen that before! As we work in any area, we accumulate experiences and build up a collection of recognized patterns. The more patterns we learn, the easier it is to match a new situation to one of the patterns in our collection. When a new situation occurs, we recognize the situation as familiar by matching it to a pattern we have encountered in the past.

For instance, a firefighter sees the color of the smoke and the force with which it is *billowing, and suspects that toxic chemicals may be burning. A manager sees an increase in small errors from a normally careful employee, some loss of speech fluency, less predictable work hours, a slight increase in irritability, and wonders if an employee is having some problems with alcohol or drugs.

The ability to detect patterns is easy to take for granted but hard to learn. Some of the leading researchers in psychology, including the Nobel *laureate Herbert Simon, have demonstrated that pattern recognition explains how people can make effective decisions without conducting a deliberate analysis.

Once we recognize a pattern, we gain a sense of a situation: We know what *cues* are going to be important and need to be monitored. We know what types of *goals* we should be able to accomplish. We have a sense of what to *expect* next. And the patterns include routines for responding — *action scripts*. If we see a situation as typical then we can recognize the typical ways to react. That's how we have hunches about what is really going on, and about what we should do about it.

Intuition is the way we translate our experiences into judgments and decisions. It's the ability to make decisions by using patterns to recognize what's going on in a situation and to recognize the typical action script with which to react. Once experienced intuitive decision makers see the pattern, any decision they have to make is usually obvious.

(C) The more patterns and action scripts we have available, the more expertise we have, and the easier it is to make decisions. The patterns tell us what to do and the action scripts tell us how. Without a collection of patterns and action scripts, we would have to painstakingly think out every situation from the beginning.

Because pattern matching can take place in an instant, and without conscious thought, we're not aware of how we arrived at an intuitive judgment. That's why it often seems mysterious to us.

Even if the situation isn't exactly the same as anything we have seen before, we can recognize similarities with past events and so we automatically know what to do, without having to deliberately think out the options. We have a sense of what will work and what won't. Basically, it's at this point that we have become (D) intuitive decision makers.

(Adapted from Gary Klein, *The Power of Intuition: How to Use Your Gut Feelings to Make Better Decisions at Work*)

(注) *haphazard でたらめの　　*stake 危険の度合い
*billow 大波のようにうねる　　*laureate 受賞者

問 1 下線部(A)について，the whole thing が指す具体的な内容を明らかにして，日本語で説明しなさい。

問 2 下線部(B)を日本語に訳しなさい。

問 3 下線部(C)を日本語に訳しなさい。

問 4　下線部(D)について説明した以下の文章の中で，空欄①～④に入る最も適切な語句をそれぞれの選択肢から1つ選び，記号で答えなさい。

If you have had repeated experiences with a situation, you will be able to make a connection between them（ ① ）so that you can（ ② ）about what's going on now. This will enable you to get to know（ ③ ）will have to be monitored, what kind of goals are attainable, and what will happen next. If you can collect a sufficient amount of action scripts, under any encounter with a new situation you can（ ④ ）a previously learned pattern and find typical ways to react to it. If you have attained such an ability, you will be referred to as an intuitive decision maker.

空欄①　(ア) deliberately　(イ) unconsciously
(ウ) painstakingly　(エ) normally

空欄②　(ア) make a decision　(イ) evaluate options
(ウ) recognize a pattern　(エ) miss something important

空欄③　(ア) that situation　(イ) what patterns
(ウ) the typical ways　(エ) what cues

空欄④　(ア) match it to　(イ) reconsider
(ウ) keep an open mind against　(エ) respond to

———このページは白紙———

Ⅱ　次の英文を読み，下の問いに答えなさい。

The increasing standardization of education conflicts with the most natural way in which people of all ages learn, and especially young children: through play. Play in its many forms has fundamental roles in all phases of life and especially in the physical, social, emotional, and intellectual development of children. The importance of play has been recognized in all cultures; it has been widely studied and endorsed in the human sciences and demonstrated in practice in enlightened schools throughout the world. And yet the standards movement in many countries treats play as a trivial and unimportant extra in schools — a distraction from the serious business of studying and passing tests. (A) The exile of play is one of the great tragedies of standardized education.

Peter Gray is a research professor of psychology at Boston College. He has been studying play from a biological evolutionary perspective, and he notes that human young, when they are free from other responsibilities, play much more than other mammals, and that they benefit from this tremendously. A few years back, he began a survey of anthropologists who had been studying hunter-gatherer cultures. All of the anthropologists surveyed pointed out that children in these cultures were allowed to play without adult guidance all day. The adults considered unsupervised play essential to learning skills that lead to becoming responsible grown-ups. "Some of these anthropologists told us that the children they observed in these cultures are among the brightest, happiest, most cooperative, most well-adjusted, most resilient children that they had ever observed anywhere," Dr. Gray said. "So from a biological evolutionary perspective, play is nature's means of insuring that young mammals, including young human beings, acquire the skills that they need to acquire to develop successfully into adulthood."

Compare this with how most developed cultures organize their children's education. As Dr. Gray points out in his book *Free to Learn*, children start school

at ever-younger ages. "We now have not only kindergarten, but prekindergarten in some districts. And preschools, which precede kindergarten or prekindergarten, are structured more and more like elementary schools — with adult-assigned tasks replacing play." The school day has grown longer, and now there are renewed calls to extend the school year. Along the way, opportunities for free play within the school day have largely been eliminated. (B) "Not only has the school day grown longer and less playful, but school has intruded ever more into home and family life. Assigned homework has increased, eating into time that would otherwise be available for play."

Peter Gray considers this a tragic loss for our children. He stands in a long tradition of psychologists, philosophers, anthropologists, and educators who argue that children "are designed, by nature, to play and explore on their own, independently of adults. They need freedom in order to develop; without it they suffer. The drive to play freely is a basic, biological drive."

Lack of free play may not kill the physical body, says Dr. Gray, as would lack of food, air, or water, but it kills the spirit and stops mental growth. "Free play is the means by which children learn to make friends, overcome their fears, solve their own problems, and generally take control of their own lives. It is also the primary means by which children practice and acquire the physical and intellectual skills that are essential for success in the culture in which they are growing. (C) Nothing that we do, no amount of toys we buy or 'quality time' or special training we give our children, can compensate for the freedom we take away. The things that children learn through their own initiatives, in free play, cannot be taught in other ways."

I couldn't agree with him more. Children have a powerful, innate ability to learn. Left to their own devices, they will explore options and make choices that we can't, and shouldn't, make for them. Play is absolutely fundamental to learning: it is the natural fruit of curiosity and imagination. And yet the standards movement is (D).

When I was a child, we had regular breaks in the school day where we could play on our own and with each other, indulge our imaginations, and experiment with a range of practical skills and social roles. Now, perhaps a fifteen-minute recess is *shoehorned into the elementary school schedule and is the first thing to go if the schedule is disrupted. Meanwhile, politicians *lobby for longer school days and longer school years.

Many of the problems in raising achievement in schools are rooted in how school is done and the extent to which the conventions conflict with the rhythms of natural learning. If your shoes hurt, you don't polish them or blame your feet; you take the shoes off and wear different ones. (E)

(Adapted from Ken Robinson and Lou Aronica, *Creative Schools*)

(注) *shoehorn 狭い所へ押し込む
*lobby 働きかける

問 1 下線部(A)のように主張する理由は何か，本文に即して日本語で答えなさい。

問 2 下線部(B)を日本語に訳しなさい。

問 3 下線部(C)を日本語に訳しなさい。

問 4　空欄(D)に入る最も適切な語句を，次の(ア)～(エ)の中から1つ選び，記号で答えなさい。

(ア) positively persuading more parents to participate in school activities

(イ) sensitively giving more playtime to children within the curriculum

(ウ) actively eliminating opportunities for play in schools

(エ) aggressively encouraging teachers to make changes in schools

問 5　下線部(E)に次の(ア)～(ウ)の文を入れるとき，それらをどの順序で並べるのが最も適切か，記号で答えなさい。

(ア) Work with them to change it so that it does work.

(イ) If the system doesn't work, don't blame the people in it.

(ウ) The people who are best placed to make the change are those who, in the right conditions, can have the most impact on the quality of learning: the teachers.

Ⅲ　次の英文を読み，下の問いに答えなさい。

Prof. Jones runs a seminar class for the debating team at his university in America. The main class objective is to prepare students for the national debate competition that takes place annually in the state of California. His students are practicing their debating skills and have been split into two teams.

Prof. Jones: The theme of today's debate is technology and how it has shaped the way we communicate. There are numerous online SNS platforms such as Facebook and Twitter, and apps such as What's App and Line. These all allow us to communicate with each other on our smartphone predominantly through texting. However, some would say that instead of uniting us, this technology has actually isolated us from society and that devices such as the smartphone are actually hindering real face-to-face socializing. Therefore, the proposition that has been put to our two debating teams today is: **"Communication technology has left us more isolated."**

Team Red will support this proposition and Team Blue will argue against it. Team Red will initially make a brief opening argument for the proposition and this will be followed by Team Blue's argument. So let's get started. Team Red has won the toss and has elected to go first.

Team Red captain: We argue that yes, communication technology has made us more isolated. This has been an issue for a number of years now and popular online videos such as "Look Up" and "Disruptions" have specifically addressed this problem. They have received more than 51 and 61 million views respectively. This alone shows us that this problem has attracted huge attention and is a cause for concern. Some people have a better relationship with their smartphone than with real people. I am sure you have seen situations of couples or friends outside who don't actually talk to each

other, but are instead too absorbed in what is going on within their smartphone.

Platforms such as Instagram give the illusion that people have numerous friends and followers. However, they will most likely never meet any of these people. This communication platform gives a distinct fantasy-like lifestyle of the people who create them. We believe that what you see on the screen and the real lives of these people are completely different. The technology has in fact made them more alone.

Would you rather share a special moment with close friends, to talk and laugh with them in real time? Or, would you rather upload a picture onto Instagram by yourself and then constantly check to see if people have posted a reply? I read recently that a CNN report mentioned that teenagers check their social media over 100 times a day and spend 9 hours on their smartphone every day.

Is that living? Or, is that being a slave to your smartphone? We suggest that people are too obsessed with their smartphone and that this culture is ruining communication between people. People simply don't talk to each other anymore. Isn't it better to live life for real rather than view it through a small 4.7 inch screen? Surely, it is the former. The focus here is on the fact that people prefer to have relationships with superficial things such as how many "likes" you receive on Facebook and it does not reflect the user's real life. I know people who have thousands of followers on Twitter but have very few people around them who they could call true friends.

This technology has created a fantasy world that leaves us more alone and isolated. Technology cannot replace real life dialogue and interaction. This concludes our opening argument.

Prof. Jones: A big thank you to the Team Red captain. You have certainly given us an interesting perspective on the issue. Now the Team Blue captain

will present their ideas that counter the proposition that communication technology has left us more isolated.

Team Blue captain: _____

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問 1　次の(1)~(5)から本文の内容と合うものを2つ選び，記号で答えなさい。

(1) The national debate takes place every other year, and Prof. Jones's students have won it three years consecutively.

(2) Team Red states that people are too engaged with their smartphone, and this influences their relationships with real people.

(3) Prof. Jones believes that smartphones are negatively influencing real face-to-face communication.

(4) Team Red argues that digital online communication is an illusion and is no match for real face-to-face communication.

(5) According to Team Red, a CNN report has suggested that spending 9 hours on your smartphone a day is an unusual way to live.

問 2　次の指示に英語で答えなさい。

Imagine you are the Team Blue captain. State your opinion giving at least two reasons.

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Ⅳ　次の文章を読み，下線部(A)，(B)を英語に訳しなさい。

人間には，グライダー能力と飛行機能力とがある。受動的に知識を得るのが前者，自分でものごとを発明，発見するのが後者である。(A)両者はひとりの人間の中に同居している。グライダー能力をまったく欠いていては，基本的知識すら習得できない。何も知らないで，独力で飛ぼうとすれば，どんな事故になるかわからない。

しかし，現実には，グライダー能力が圧倒的で，飛行機能力はまるでなし，という“優秀な”人間がたくさんいることもたしかで，しかも，そういう人も“翔(と)べる”という評価を受けているのである。

学校はグライダー人間をつくるには適しているが，飛行機人間を育てる努力はほんのすこししかしていない。

(中略)

指導者がいて，目標がはっきりしているところではグライダー能力が高く評価されるけれども，新しい文化の創造には飛行機能力が不可欠である。それを学校教育はむしろ抑圧してきた。急にそれをのばそうとすれば，さまざまな困難がともなう。

他方，現代は情報の社会である。グライダー人間をすっかりやめてしまうわけにも行かない。それなら，グライダーにエンジンを搭載するにはどうしたらいいのか。学校も社会もそれを考える必要がある。

(中略)

(B)グライダー専業では安心していられないのは，コンピューターという飛び抜けて優秀なグライダー能力のもち主があらわれたからである。自分で翔べない人間はコンピューターに仕事をうばわれる。

(外山滋比古『思考の整理学』より)

(注)　グライダー　glider