

## 平成 22 年度入学者選抜学力検査問題

## 英 語

## 注 意 事 項

1. この冊子は、監督者から解答を始めるよう台図があるまで開いてはいけません。
2. 解答は解答用紙に書きなさい。解答用紙は 4 枚です。監督者から指示があったら、4 枚とも、解答用紙の上部の所定欄に受験番号と座席番号を、また、下部の所定欄には座席番号をそれぞれ必ず記入しなさい。
3. 英語を選択科目として届け出た者のみが解答しなさい。それ以外の者が解答すると失格となります。
4. この冊子は全部で 12 頁からなります。落丁、乱丁または印刷の不備なものがあったら申し出てください。
5. 解答用紙は、記入の有無にかかわらず、持ち帰ってはいけません。
6. この冊子は持ち帰ってかまいません。

I 次の文章を読み、問1から問8の設問に答えなさい。\*が付いている単語には、本文の後ろに注があります。

Who needs a university in the age of the internet? All the world's digital knowledge is available at a search. We can connect those who want to know with those who know. We can link students to the best teachers for them. We can find experts on any topic. Textbooks need no longer be just printed on the page but can be linked to information and discussion; they can be the products of collaboration, updated and corrected, answering questions and giving quizzes, even singing and dancing. There's no reason my children should be limited to the courses at one school; even now, they can get coursework online from MIT and Stanford. Even I, long out of college, could take these courses too.

You may suspect that because I'm a professor, I'll now criticize these ideas in order to demonstrate that we must preserve universities as they are. But I won't do that. Of course, I value the academy and its tradition and don't wish to destroy it. Universities have a very important function. But just as every other institution is facing fundamental challenges to its essence and existence, so is education.<sup>(1)</sup> Indeed, education is one of the institutions most deserving of change and with the greatest opportunities to come of it.

I may be a utopian, but I imagine a new educational ecology where students may take courses from anywhere and instructors may select any students, where courses are collaborative and public, where creativity is \*nurtured, where making mistakes is valued over sameness and safety, where education continues long past age 21, where tests and degrees matter less than one's own \*portfolio of work, where anyone with enough knowledge may become a teacher, where the skills of research and reasoning and \*skepticism are valued over the skills of ( ② ) and calculation, and where universities teach an abundance of knowledge to those who want it rather than manage empty seats in a class.

Who's to say that college is the only or even the best place to learn? Bill Richardson, who teaches fellow educators how to use the internet in the classroom, wrote an open letter to his children on his blog: "I want you to know that you don't have to go to college if you don't want to, and that there are other avenues to achieving that future that may be more instructive, more meaningful, than getting a degree." He said education may take them to classrooms and lead to certification, but it also may involve learning through games, communities, and networks built around their interests. "Instead of the piece of paper on the wall that says you are an expert," he told his children, "you will have a wide range of products and experiences, reflections and conversations that will show your \*expertise, show what you know, make it \*transparent. It will be comprised of a body of work and a network of learners that will be useful to you throughout your lives, that will evolve as you evolve, and will capture your most important learning."

If that is what education looks like, what does a university look like?  
(3) What is its main purpose? I asked that question on my blog, and one of the replies identified the key roles and benefits of universities: teaching, testing, and research. However, there is another unofficial role, which I consider to be equally important: socialization. I'd like to focus on that role here.

Socialization is, of course, a key reason why we go to college and send our children there. Adults see college as a process of maturation and increased independence and responsibility.  
(4) Students, on the other hand, may see it as a process of getting away from their parents. We should have time to have that experience and live with our peers. However, this is also possible outside the university.

If young people have the luxury of time and resources to explore the world before settling down to a job and starting a family, that's great. That exploration can take the form of backpacking around Asia, hanging out with friends or doing volunteer work. These days it may even mean starting a

company. Our young years may be our most creative and productive. Bill Gates and Mark Zuckerberg both dropped out of school to start their corporate giants. Should we be forcing young people to go through 12, 16, or even 18 years of school trying to get them all to think the same way—before they make things?

Perhaps we need to separate youth from education. Education lasts forever. Youth is the time for exploration, maturation, and socialization. What if we told students that they should take one day a week or one course a term or one year in college to create something: a company, a book, a song, a sculpture, an invention? School could act as an \*incubator, advising, pushing, and nurturing their ideas and effort. What would come of it? Great things and \*mediocre things. But it would force students to take greater responsibility for what they do and to move away from uniformity. It would make them ask questions before they are told answers. It could reveal to them their own talents and needs.

Another benefit of a university's society is its \*alumni network. This network has long held value for getting jobs, hiring, and making connections. But now that we have the greatest connection machine ever made—the ( (7) )—do we still need that old mechanism for connections? \*Facebook and other new networking services enable us to create and organize extended networks springing out of not just school but employment, conferences, introductions, even blogs. As an internet fan, I celebrate the idea that old networks could be surpassed by new \*meritocracies. Facebook didn't just bring elegant organization to universities; it could replace them as a creator of networks.

(注)

nurtured<nurture：育てる

portfolio：作品集

skepticism：疑いを持つこと

expertise：高度の専門的知識・技能

transparent：わかり易い

incubator：保育器

mediocre：並みの

alumni：卒業生

Facebook：フェイスブック。ソーシャルネットワーキングサービス(SNS)  
として2004年にサービスが始まった。

meritocracies<meritocracy：実力主義社会

問 1 下線部①を so の意味が分かるように訳しなさい。

問 2 (2)の空欄に入る最も適切な単語を下から選び、その番号を書きなさい。

① creativity ② imagination ③ memorization ④ questioning

問 3 下線部③を日本語にしなさい。

問 4 下線部④に述べられている「大学」に対する大人と学生の認識の違いについて、説明しなさい。

問 5 下線部⑤の意味することに最も近い内容のものを下から選び、その番号を書きなさい。

① Being creative is the most important thing for young people.

② Going to university later in life is more important than going there when we are young.

③ It is a waste of time for young people to go to university.

④ It is wrong to assume that we should receive all our education while we are young.

問 6 下線部(6)の it があらわす語句(3語)を文中から抜き出さない。

問 7 (7)の空欄に入る最も適切な英単語(1語)を文中から抜き出さない。

問 8 次の英文は本文の要約です。(a)~(d)の空欄に入れるのに最も適切な単語を下の①~⑩から選び、その番号を書きなさい。囲みの中の単語はそれぞれ1回しか使えません。

The internet provides us with access to ( a ), so universities may not play the same role as they did in the past. We can use the internet to find teachers and courses from around the world. Although the academic tradition of universities is important, the function of universities is changing. This change can bring about opportunities for different kinds of learning. These include the chance to take courses from other places. There would be more emphasis on ( b ), reasoning and individual achievement. Furthermore, university is not the only place where we can be ( c ); we may also learn through other communities and networks that can develop and change throughout our lives. Regarding ( d ), young people can experience this through other activities such as traveling or doing volunteer work. They should also use their creativity to achieve something while they are still young.

- |                 |           |            |          |
|-----------------|-----------|------------|----------|
| ① creativity    | ② educate | ③ educated | ④ helped |
| ⑤ knowledge     | ⑥ memory  | ⑦ school   |          |
| ⑧ socialization | ⑨ value   | ⑩ weigh    |          |

II 次の文章を読み、問1から問8の設問に答えなさい。\*が付いている単語には、本文の後ろに注があります。

Jill, 19, from Michigan, wants to major in political science at university. There is just one problem: she keeps failing the mathematics examination. “I am an excellent student in all other subjects, so my consistent failure at math made me feel very stupid,” she says. In fact, she stopped going to her mathematics class after a while because, she claims, “I didn’t like being reminded of what a fool I was.” Last November, Jill had a test to find out if she had learning difficulties. She found that while her \*IQ is above average, her \*numerical ability is equivalent to that of an 11-year-old because she has a condition called dyscalculia. She was partly relieved to hear such a \*diagnosis because it explained a lot of difficulties she had in her daily life. She can’t easily read ( 1 ), for example, and always arrives 20 minutes early for fear of being late. When it comes to paying in shops or restaurants, she hands her <sup>(2)</sup> \*wallet to a friend and asks her to do the calculation, knowing that she is likely to get it wrong.

This is the stressful world of dyscalculia, where inhabitants are continually trying to avoid situations in which they have to perform even basic calculations. Despite affecting about 5 per cent of people, dyscalculia has been neglected by science for a long time, and people suffering from it are often incorrectly labeled as unintelligent. Now researchers are starting to understand the problem more deeply, bringing hope that dyscalculic children will start to get specialist help.

For hundreds of millions of people this really matters. “We know that basic mathematical ability is essential for success in life, both when they seek employment and in terms of social success,” says Daniel Ansari from the University of Western Ontario. A report <sup>(3)</sup> published in October 2008 claimed that dyscalculia considerably decreases a student’s chances of obtaining good exam scores and results in much lower lifetime earnings.

People with dyscalculia, also known as mathematics disorder, can often be <sup>(4)</sup>highly intelligent and communicate well. They do not have a general learning problem. Instead, they have difficulty in understanding numerical sets. Put simply, this means that they find it difficult to understand the connection between a set of objects — five oranges, for example, — and the numerical symbol that represents it, such as the word “five” or the \*numeral 5. Neither can they understand what is involved in performing additions or \*subtractions.

People with dyscalculia fail to see the connection between a set of objects and the numerical symbol that represents it. This concept of “exact number” is known to be unique to humans, but there is much disagreement about where it comes from. One school of thought argues that at least some elements of it are \*innate, and that babies are born with an exact-number “module” in their brain. Others say exact number is learned and that it builds upon an innate and evolutionarily ancient number system which we share with many other species. This “approximate number sense” (ANS) <sup>(5)</sup>is what you use when you look at two heavily \*laden apple trees and, without actually counting the apples, make a judgment as to which has more. In this view, as children acquire speech, they map number words and then numerals onto the ANS, tuning it to respond to increasingly precise numerical symbols.

The debate over exact number is directly relevant to people suffering from dyscalculia because tackling their problem will be easier if we understand it better. If we have an innate exact number module that is somehow not functioning well in people with dyscalculia, they could be encouraged to trust their ability to compare large numbers using their ANS, and learn to use calculators for the rest. However, if exact number is learned, then perhaps dyscalculia could be dealt with by teaching mathematics in ways that help with the process of mapping numbers onto the ANS.

So how do the two models stand up? The innate number module theory makes one obvious prediction: babies should be able to grasp exact numbers. <sup>(6)</sup>This was explored in an experiment in the early 1990s. Karen Wynn, a

researcher from the University of Arizona, knew that babies stare for longer at things that surprise them. In her experiment, she decided to use dolls and a curtain to show that five-month-old infants could discriminate between one, two and three. The result of the experiment was that the babies seemed to look for longer if the number of dolls that came out from behind the curtain did not match the number that went in. This suggests that there is a sense of innate number.

However, there is another point of view that our sense of exact number is not innate but learned. If that is the case, it seems to be connected with our use of language. Stan Dehaene, a \*neuroscientist, supports this view. He has worked with an Amazonian tribe whose language only contains words for numbers up to five, and claims that it provides good evidence for the idea that exact number is learned. Supporters of this idea also refer to research showing how young children actually acquire an understanding of numbers. First they learn what the number word “one” means, then “two” and so on until, around the age of four, they suddenly grasp mathematical concepts such as counting. “There is something very special occurring in development with exact numbers, and with the understanding of number words,” says Dehaene. For now, the idea that exact number is learned is more convincing, suggesting that dyscalculia is a learning problem.

(注)

IQ：知能指数

numerical：数の，数的な

diagnosis：診断

wallet：財布

numeral：数字

subtractions < subtraction：引き算

innate：生まれつきの

laden：(果実を)たくさんつけた

neuroscientist：神経科学者

問 1 (1)の空欄に入るのに最も適切な語句を下から選び、その番号を書きなさい。

- ① a difficult book
- ② a street sign
- ③ an analogue clock
- ④ an important letter

問 2 Jill がなぜ下線部(2)のようなことをするのかを説明しなさい。

問 3 下線部(3)の report (報告書)にはどのような内容が書かれていたのかを説明しなさい。

問 4 下線部(4)のような人たちはどのような困難を持っていると説明されていますか。この段落に書かれている内容から 2 点書きなさい。

問 5 下線部(5)の ANS とは具体的にはどういうものですか。本文中で示されているりんごを使った例で説明しなさい。

問 6 下線部(6)で述べられていることはどのような実験で確かめられたのかを説明しなさい。

問 7 下線部(7)を日本語に訳しなさい。

問 8 次の文章は英文の要約です。(a)~(d)の空欄に入れるのに最も適切な単語を選び、その番号を書きなさい。囲みの中の単語はそれぞれ1回しか使えません。

In discussions about the problem of dyscalculia, different ideas have emerged regarding how we come to understand the concept of "number." Those who propose that the idea of exact number is learned think that it is connected with our sense of ( a ). One scientist who thinks so is Stan Dehaene, a neuroscientist. He discovered that there is an Amazonian tribe whose language does not contain words for numbers above five. From this idea, he ( b ) that it is probable that exact number is learned. Other research ( c ) favor of this idea suggests that children come to understand the concept of number by first learning the meaning of "one" and then moving on to understanding other numbers. Finally, when they are around four years old, they can understand the basic concepts of ( d ). The way we reach an understanding of number is different from the way we understand other ideas.

- |             |            |          |       |
|-------------|------------|----------|-------|
| ① concludes | ② denies   | ③ doubt  | ④ for |
| ⑤ in        | ⑥ language | ⑦ number | ⑧ on  |
| ⑨ studied   | ⑩ wonders  |          |       |

III AとBの設問に答えなさい。

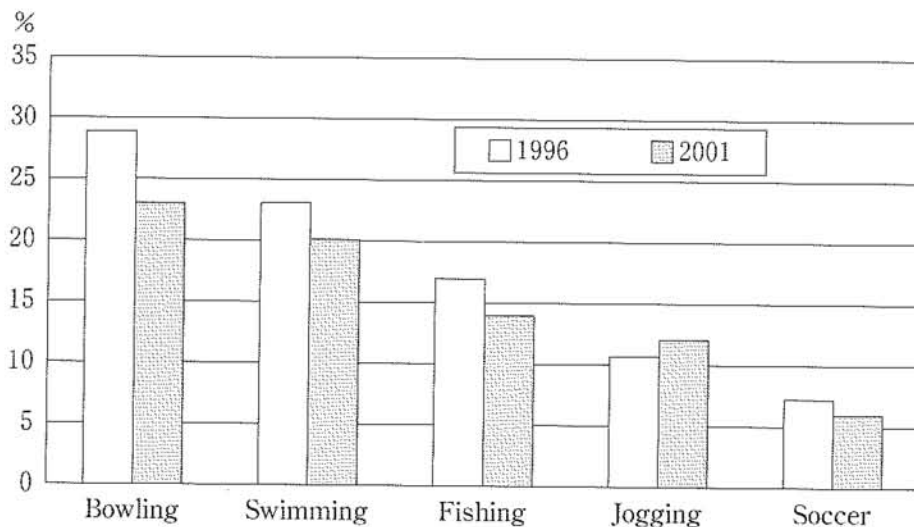
A.

次の文章を読み、下線部①～⑤に適切な英語表現を入れて、物語を完成させなさい。

Ben, Peter and Max were having a vacation together and were sharing a large suite on the top floor of a 90-story hotel. After spending a long day sightseeing and feeling very tired, they arrived back at the hotel. Just as they were about to go up to their room, they were shocked to hear that  
① \_\_\_\_\_, and they would have to climb the stairs all the way to the top floor. They decided that they had no choice but to deal with the situation as positively and cheerfully as they could. So Ben said to Peter and Max, "Let's pass the time by doing something interesting. I'll tell jokes until we reach the 30th floor, and Peter can sing happy songs until we reach the 60th floor, and then Max can tell sad stories the rest of the way." So they started to climb the stairs. When they reached the 30th floor, Ben stopped telling jokes and Peter \_\_\_\_\_<sup>②</sup>. When they reached the 60th floor, Peter stopped singing and Max \_\_\_\_\_<sup>③</sup>. "Now I have a really sad story to tell you," he said. "I left the room key in the car, so we have to \_\_\_\_\_<sup>④</sup>." If only their room \_\_\_\_\_<sup>⑤</sup> the top floor, they wouldn't have been in this situation.

B.

下のグラフを見て、その内容に合うように( )の中の単語を並べ替えなさい。解答欄には、単語を正しい順に並べ替えて書きなさい。ただし、それぞれに使わない単語が一つずつ含まれています。



Participation Rates in Sports by Type — 1996 and 2001

- (1) This graph shows the (20%, five, in, participation, rates, sports) in both 1996 and 2001.
- (2) In both years bowling and swimming (most, popular, soccer, the, two, were) sports.
- (3) We can also see that (fewer, fishing, had, participants, soccer, than) the other four sports.
- (4) Jogging was the (an, decrease, increase, only, showed, sport, that) in the rate of participation.