

令和4年度入学試験問題

英

語

コミュニケーション
英語 I・II・III
英語表現 I・II

(注意事項)

1. 問題冊子は指示があるまで開かないこと。
2. 問題冊子は15ページ、解答紙は5枚あります。「始め」の合図があったらそれぞれを確認すること。
3. 解答紙それぞれの2箇所を受験番号を記入すること。
4. 受験番号は、裏面の記入例にならって、マス目の中に丁寧に記入すること。
5. 解答はすべて解答紙の所定の欄に記入すること。
6. この教科は200点満点です。なお、共創学部については400点満点に、文学部については150点満点に、経済学部経済工学科については300点満点に、芸術工学部及び農学部については250点満点に換算します。

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[1] 次の英文を読み，設問に答えなさい。(40点)

During the late nineteenth and early twentieth century the race between education and technology was the impetus behind governments making primary and secondary schooling compulsory. Technological advances also shaped how people learnt. In the early twentieth century the principles of (1) 'Taylorism' took hold in the factory, creating a focus on the standardisation of processes, the efficiency of work and the mass production of goods. As a result, schools unified their teaching practices, specialised curriculums, and measured success by student grades. This standardisation helped manage the increasing volume of students and, more importantly, equipped them for the needs of the modern workplace — getting students used to continuous assessment, sitting down for long periods of set hours and taking instruction from a leadership figure.

This form of education system, however, will simply be preparing people for a life that no longer exists and for jobs that are no longer available, because obvious changes need to occur. People will need more education as they live and work for longer. This extra education will need to be *spread out* over time rather than be front-loaded at the beginning of life. (2) And if learning is no longer front-loaded then what needs to be learnt *at the beginning* must focus less on specific skills and knowledge and more on learning how to build the foundations for a lifetime of learning. As the social philosopher Eric Hoffer remarked: 'In times of drastic change it is the learners who inherit the future. The learned usually find themselves equipped to live in a world that no longer exists.'

(3) The foundation of much current education assumes a scarcity of knowledge. The role of the teacher is to convey facts and test students on their memorisation of them. However, in 2018 Internet traffic was estimated to be 1.8 zetta* bytes — or more than all the words humans have written in their entire history. The world has transformed from having a scarcity to an

abundance of knowledge.

This transformation requires a major change in how and what we learn. A shift in the education system from the idea of ‘students’ who acquire knowledge, to the notion of ‘learners’ who acquire skills and the ability to apply them. As Satya Nadella, the CEO of Microsoft, briefly remarked: ‘The “learn it all” will always beat the “know it all” in the long run.’ The implication is that from an early stage, teaching has to focus on discovering where knowledge lies, dealing with ambiguity and uncertainty and assessing and evaluating insights to solve a particular problem. ⁽⁴⁾ These are the very human skills which Hans Moravec describes in his ‘landscape of human competencies’ as being least likely to be performed by a machine. Superimposing onto this the implications of longer working lives serves only to emphasise the crucial role of learning how to learn and discover (as well as how to ‘unlearn’).

It isn’t just the human skills of critical thinking, hypothesis framing and synthesis that will be in demand from the education system. Given the rising tide of Moravec’s landscape, the salary premium attached to communicating, teamwork and interpersonal skills will also inevitably increase. Angela Ahrendts, former vice president of retail at Apple Inc., understands the importance of this when she says: ‘the more technologically advanced our society becomes, the more we need to go back to the basic fundamentals of human connection.’

Notes:

zetta*: 10^{21}

問 1. 下線部(1) 'Taylorism' が教育にどのような具体的な影響を与えたかについて、150字以内の日本語でまとめなさい。ただし、句読点も文字数に含む。

問 2. 下線部(2) を日本語に訳しなさい。

問 3. 下線部(3) が表す内容として最も適切なものを以下の(A)～(D)から一つ選び、記号で答えなさい。

- (A) Our education system is failing to teach us the truth.
- (B) Our education system prepares us for working in industry.
- (C) Our schools assume we have too much information.
- (D) Our schools teach what they think students don't know.

問 4. 下線部(4) These が指さないものを以下の(A)～(D)から一つ選び、記号で答えなさい。

- (A) Critical thinking and problem-solving
- (B) Finding the source of information
- (C) Handling data that is inconclusive
- (D) Memorization of facts and definitions

問 5. 以下の(A)～(D)のうち、本文の内容に合わないものを一つ選び、記号で答えなさい。

- (A) Acquiring skills will be more important than the acquisition of knowledge in the future.
- (B) Focusing on IT-related skills is sufficient to prepare students for the new marketplace.
- (C) Progress will also include a return to traditional methods of working together with others.
- (D) Society needs to re-think the priorities of its educational systems.

〔2〕 次の英文を読み，設問に答えなさい。(40点)

(1) _____ Why did you fall in love with your partner?

When we start to examine the basis of our life choices, whether they are important or fairly simple ones, we might come to the realization that we don't have much of a clue. We might even wonder whether we really know our own mind, and what goes on in it outside of our conscious awareness.

Luckily, psychological science gives us important and perhaps surprising insights. One of the most important findings comes from psychologist Benjamin Libet in the 1980s. He devised (2) an experiment which was deceptively simple, but has created an enormous amount of debate ever since.

Participants were asked to sit in a relaxed manner in front of an adapted clock. On the clock face was a small light revolving around it. All those taking part had to do was to bend their finger whenever they felt the urge, and remember the position of the light on the clock face when they experienced the initial urge to move their finger. At the same time as that was all happening, the participants had their brain activity recorded via an electroencephalogram* (EEG), which detects levels of electrical activity in the brain.

What Libet was able to show was that timings really matter, and they provide an important clue as to whether or not the unconscious plays a significant role in what we do. He showed that the electrical activity in the brain built up well before people consciously intended to bend their finger, and then went on to do it.

In other words, unconscious mechanisms, through the preparation of neural activity, set us up for any action we decide to take. But this all happens before we consciously experience intending to do something. Our unconscious appears to rule all actions we ever take.

But, as science progresses, we are able to revise and improve on what we know. (3) We now know that there are several basic problems with the

experimental set-up that suggest the claims that our unconscious fundamentally rules our behavior are significantly exaggerated. However, the original findings are still fascinating even if they can't be used to claim our unconscious completely rules our behavior.

Another way of approaching the idea of whether we are ultimately ruled by our unconscious is to look at instances where we might expect unconscious manipulation to occur. The most common example was marketing and advertising. This may not be a surprise given that we often come across terms such as “subliminal advertising”, which implies that we are guided towards making consumer choices in ways that we don't have any control over consciously.

James Vicary, who was a marketer and psychologist in the 1950s, brought the concept to fame. He convinced a cinema owner to use his device to flash messages during a film screening. Messages such as “Drink Coca-Cola” flashed up for a 3,000th of a second. He claimed that sales of the drink shot up after the film ended. After significant public anger concerning the ethics of this finding, Vicary came clean and admitted the whole thing was fake — he had made up the data.

In fact, it is notoriously difficult to show in laboratory experiments that the flashing of words below the conscious threshold* can prepare us to even press buttons on a keyboard that are associated with those stimuli, (4) _____ manipulate us into actually changing our choices in the real world.

As with the Libet study, this research motivated intense interest. Unfortunately, efforts to reproduce such impressive findings were extremely difficult, not only in the original consumer contexts, but beyond into areas where unconscious processes are thought to be common such as in unconscious lie detection, medical decision-making, and romantically motivated risky decision-making.

(5) That said, there are of course things that can influence our decisions and steer our thinking that we don't always pay close attention to, such as emotions, moods, tiredness, hunger, stress and biases. But that doesn't mean we are ruled by our unconscious — it is possible to be conscious of these factors. We can sometimes even counteract them by putting the right systems in place, or accept that they contribute to our behavior.

Notes:

electroencephalogram*: 脳波図 (脳波電位の記録)

threshold*: 人が何かを感じ、反応し始める水準

問 1. 下線部 (1) の空所に入る最も適切なものを以下の (A)～(D) の中から一つ選び、記号で答えなさい。

- (A) What is a cause of climate change?
- (B) What is the meaning of life?
- (C) Why did you buy your car?
- (D) Why were you born where you were born?

問 2. 下線部 (2) an experiment の手順 (結果や意義は含まない) を、100～120 字の日本語でまとめなさい。ただし、句読点も字数に含む。また、英文字も 1 字とする。

問 3. 下線部 (3) を日本語に訳しなさい。

問 4. 下線部(4)の空所に入る最も適切なものを以下の(A)～(D)の中から一つ選び、記号で答えなさい。

- (A) as well as
- (B) in addition
- (C) let alone
- (D) or it could

問 5. 下線部(5) That said に最も近い意味を表すものを以下の(A)～(D)の中から一つ選び、記号で答えなさい。

- (A) As is often the case,
- (B) As mentioned above,
- (C) Moreover,
- (D) Nevertheless,

問 6. 以下の(A)～(D)のうち、本文の内容に合わないものを一つ選び、記号で答えなさい。

- (A) Electrical activity in the brain very often predicts what behavior will follow.
- (B) Our feelings and current mental condition likely steer some of our behavior.
- (C) The experiments of James Vicary are concrete proof that unconscious processes influence our decision-making.
- (D) The research of Benjamin Libet was an important step in our understanding of unconscious influence.

[3] 次の英文を読み、設問に答えなさい。文中の(A)～(D)については、問1を見ること。(40点)

Imagine that four teams of friends have gone to a shooting arcade. Each team consists of five people; they share one rifle, and each person fires one shot to hit the bull's-eye, the small circular area at the center of a target. Figure 1 shows their results.

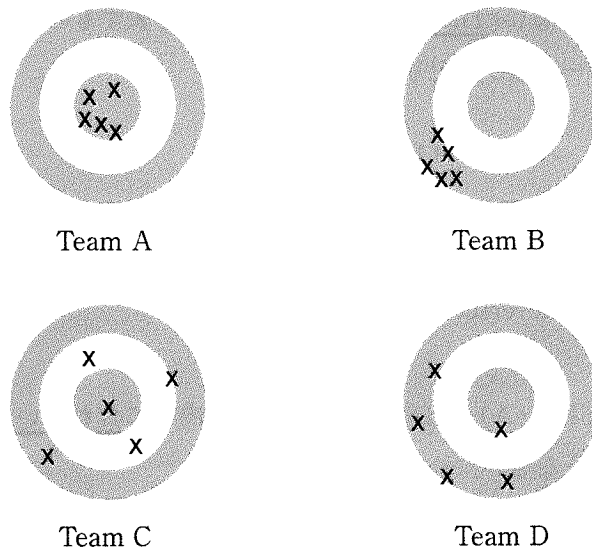


Figure 1: *Four teams*

Team A: _____ (A)
Team B: _____ (B)
Team C: _____ (C)
Team D: _____ (D)

But this is not a book about target shooting. Our topic is human error. Bias and noise — systematic deviation and random scatter — are different components of error. The targets illustrate the difference.

The shooting arcade is a metaphor for what can go wrong in human

judgment, especially in the diverse decisions that people make on behalf of organizations. In these situations, we will find the two types of error illustrated in figure 1. Some judgments are biased; they are systematically off target. Other judgments are noisy, as people who are expected to agree end up at very different points around the target. Many organizations, unfortunately, are afflicted by both bias and noise.

Figure 2 illustrates an important difference between bias and noise. (1) It shows what you would see at the shooting arcade if you were shown only the backs of the targets at which the teams were shooting, without any indication of the bull's-eye they were aiming at.

From the back of the target, you cannot tell whether Team A or Team B is closer to the bull's-eye. But you can tell at a glance that Teams C and D are noisy and that Teams A and B are not. Indeed, you know just as much about scatter as you did in figure 1. A general property of noise is that you can recognize and measure it while knowing nothing about the target or bias.

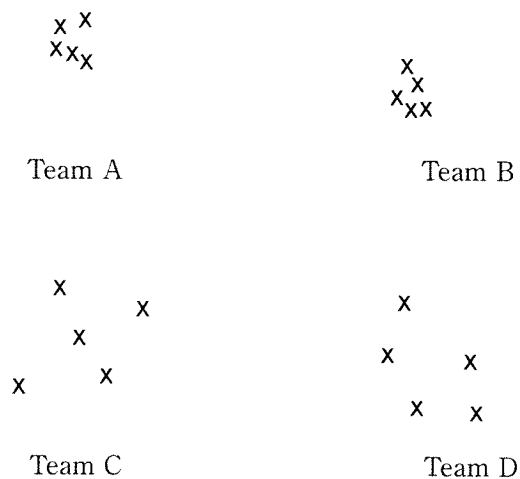


Figure 2: *Looking at the back of the target*

(2) The general property of noise just mentioned is essential for our purposes in this book, because many of our conclusions are drawn from judgments whose true answer is unknown or even unknowable. When physicians offer different diagnoses for the same patient, we can study their disagreement without knowing what troubles the patient. When film executives estimate the market for a movie, we can study the variability of their answers without knowing how much the film eventually made or even if it was produced at all. (3) We don't need to know who is right to measure how much the judgments of the same case vary. All we have to do to measure noise is look at the back of the target.

To understand error in judgment, we must understand both bias and noise. Sometimes, noise is the more important problem. But in public conversations about human error and in organizations all over the world, noise is rarely recognized. Bias is the star of the show. Noise is a minor player, usually offstage. The topic of bias has been discussed in thousands of scientific articles and dozens of popular books, few of which even mention the issue of noise. This book is our attempt to set the balance right.

問 1. Figure 1 の Team A, B, C, D の説明として最も適切なものを、以下の (ア)～(エ) からそれぞれ一つ選び、記号で答えなさい。

- (ア) This team is both *biased* and *noisy*. Its shots are systematically off target and widely scattered.
- (イ) In an ideal world, every shot would hit the bull's-eye. This team's shots are tightly clustered around the bull's-eye, close to a perfect pattern.
- (ウ) This team is *noisy* because its shots are widely scattered. There is no obvious bias, because the impacts are roughly centered on the bull's-eye. If one of the team's members took another shot, we would know very little about where it is likely to hit. Furthermore, no

interesting hypothesis comes to mind to explain the results of this team. We know that its members are poor shots. We do not know why they are so noisy.

- (エ) This team is *biased* because its shots are systematically off target. As the figure illustrates, the consistency of the bias supports a prediction. If one of the team's members were to take another shot, we would bet on its landing in the same area as the first five. The consistency of the bias also invites a causal explanation: perhaps the gunsight on the team's rifle was bent.

問 2. 本文中の語 “bias” に最も近い意味を表す 2 語の句を本文から探して書きなさい。

問 3. 下線部 (1) を日本語に訳しなさい。

問 4. 下線部 (2) The general property of noise just mentioned がこの文脈で指す内容を、日本語で書きなさい。

問 5. 下線部 (3) を日本語に訳しなさい。

問 6. 以下の (A)～(D) のうち、本文の内容に合わないものを一つ選び、記号で答えなさい。

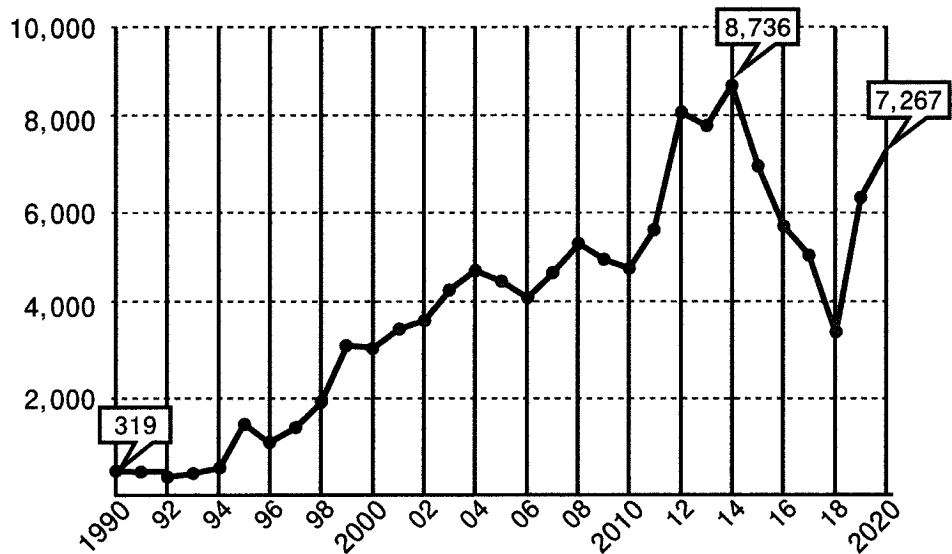
- (A) *Bias* and *noise* provide difficulties for many organizational decisions.
- (B) *Noise* needs to be the focus of more analysis in the future.
- (C) “Target shooting” is an easy-to-understand metaphor for decision-making mistakes.
- (D) The terms *bias* and *noise* can be used to describe the same phenomenon.

[4] Read the instructions and write a paragraph in English. (50 points)

The number of immigrants to Japan is likely to increase in the coming decades. Introduce and explain either (a) the benefits, (b) the drawbacks, or (c) both the benefits and the drawbacks of living in a multicultural society. Compose a well-structured paragraph, supported by examples, using about 100 English words.

[5] Read the instructions and write your answer in English. (30 points)

The graph below shows changes in the number of global UFO sightings recorded from 1990 to 2020:



Using about 75 English words, describe the trends in UFO sightings between 1990 and 2020.

Note: Words that express a number, such as 319 or 1990, are counted as one word.

