

平成 31 年度

前期日程

英語問題

〔注意〕

1. 問題冊子及び解答用紙は、試験開始の合図があるまで開いてはいけない。
2. 受験番号は、解答用紙の受験番号欄(計2か所)に正確に記入すること。
3. 問題冊子のページ数は、表紙を除き7ページである。脱落している場合は直ちに申し出ること。
4. 解答用紙は1枚である。
5. 解答は、解答用紙の指定されたところに記入すること。枠からはみ出してはいけない。
6. 問題冊子の余白は、適宜下書きに使用してよい。
7. 解答用紙は持ち帰ってはいけない。
8. 問題冊子は持ち帰ること。

I 次の英文(A)と(B)を読み, それぞれの下線部の意味を日本語で表しなさい。

(A) In December 1877, Thomas Edison made history by recording ‘Mary Had a Little Lamb’ on his phonograph and playing it back. This was not just ‘an epoch in the history of science’, it was a revolution for the human voice. Before then, hearing someone talk was exclusively a live experience: you had to be listening as the sounds emerged from the speaker’s mouth. We can read the text of great speeches that predate the phonograph, like Abraham Lincoln’s Gettysburg Address, but how exactly the president delivered the lines is lost forever. The phonograph captured the way things are said, and this can be just as important as the words themselves. When someone says ‘I’m all right’, the tone of their voice might in fact tell you they are *not* all right.

(B) In recent years, study after study examining exercise and weight loss among people and animals has concluded that, by itself, exercise is not an effective way to drop pounds. In most of these experiments, the participants lost far less weight than would have been expected, mathematically, given how many additional calories they were burning with their workouts. Scientists involved in this research have suspected and sometimes shown that exercisers, whatever their species, tend to become hungrier and consume more calories after physical activity.

II 次の英文を読んで、以下の設問に答えなさい。

We have a problem to solve whenever we want to do something but lack the immediate means to achieve it. Most of the goals we reach in our everyday life do not require problem solving because we have a habit or some prior knowledge that allows us to achieve them. Getting to work, for example, requires a series of decisions and actions that might be quite complex but are generally routine and executed automatically. We know how to start our cars, which route to drive, and so on. But if the car will not start one morning, or our usual route is blocked, *then* we have a problem to solve. Like many real world problems these are *ill-defined*, lacking clear procedures or rules for their solution. For example, if the car will not start, a variety of strategies and solutions may be tried. If the battery is flat, we may jump-start it from another car. Or we may borrow a car from a partner or friend, or decide to use public transport.

Ill-defined problems may be quite easy for a human to solve but would be next to impossible for a computer, unless it knew all the things that we know. (A) By contrast, some problems — including many studied by psychologists — are well-defined. This means that there is a clear set of rules that can be applied to get from where you are to where you want to be. (b) Artificial problems usually have this nature. (ii) Examples would be an anagram to solve (which we may encounter in doing a crossword), a sudoku puzzle, or a chess problem which requires you to find a checkmate in three moves. If a problem is well-defined, a computer program can in principle be written to solve it.

Problem solving is clearly a key feature of human intelligence. Animals have generally evolved with fixed behaviour patterns. Some of the things they do may seem very clever. For example, birds and other animals may migrate thousands of miles, arriving (usually) in the right place. (iii) Honey bees can signal the location of nectar to their fellow creatures using a sophisticated code. Predator animals follow complex strategies to trap their prey, and so on. But these behaviours

have been acquired slowly through evolution and cannot be varied by the individual animal. If the environment changes, it will not be possible for an individual to adapt its behaviour. While there is some evidence of intelligent use of tools to solve novel problems in some animals, the solution of novel problems is what generally marks our species out as different from both animals and earlier hominids. Neanderthals* had very sophisticated skills — in manufacturing tools and hunting prey, for example — but these skills were isolated from each other. Hence, they could not adapt their tool making if different kinds of prey were encountered. By contrast, our own species, *Homo sapiens sapiens*** , was able rapidly to adapt the design of artefacts to achieve changing goals, which is probably the reason that we are the only hominid species to make it to the present day.

Human intelligence does not, in the main, rely on behaviour patterns fixed by evolution, and nor does it depend on habit learning. Humans can and have solved a whole range of novel problems, which is why we have been able to develop such advanced technologies. If we want to understand human intelligence, then we need to study how it is that humans can solve both ill-defined and well-defined problems. Not all problems have a uniquely correct solution, but that does not mean that we should give them up. For example, no human or machine can guarantee to compute the best chess move in most positions, but they can certainly identify moves that are much better than others. Our best scientists are like grandmasters, because science also cannot provide knowledge that is certainly true. Even great scientific theories, like Newton's mechanics, can be later shown to be incorrect or limited in certain respects. In Newton's case, the inaccuracies cannot be detected in systems moving much slower than the speed of light, and Newton's physics was close enough to the truth to allow all manner of technologies to be developed using its principles.

*Neanderthals ネアンデルタール人

***Homo sapiens sapiens* ホモ・サピエンス・サピエンス, 新人

設問(1) 本文中の下線部(i)~(v)の単語に最も意味の近いものを, (イ)~(ニ)から一つ
選び, 記号で答えなさい。

(i) prior

(イ) precious

(ロ) premature

(ハ) previous

(ニ) profound

(ii) Artificial

(イ) Artistic

(ロ) Fake

(ハ) Man-made

(ニ) Simple

(iii) migrate

(イ) calculate

(ロ) inhabit

(ハ) memorize

(ニ) travel

(iv) novel

(イ) conventional

(ロ) fictional

(ハ) unemotional

(ニ) unusual

(v) guarantee

(イ) afford

(ロ) dare

(ハ) plan

(ニ) promise

設問(2) 本文中の下線部(a)の意味を日本語で表しなさい。

設問(3) 本文中の下線部(A)~(C)の語句に最も意味の近いものを、(イ)~(ニ)から一つ選び、記号で答えなさい。

(A) next to

(イ) eventually

(ロ) nearly

(ハ) secondly

(ニ) successively

(B) Hence

(イ) Besides

(ロ) Moreover

(ハ) Nevertheless

(ニ) Therefore

(C) in the main

(イ) for the most part

(ロ) in this case

(ハ) that is to say

(ニ) to the best of my knowledge

設問(4) 下線部(b) *well-defined* とはどのような性質を指すか、本文の内容に則して日本語で説明しなさい。

設問(5) 下線部(c) Our best scientists are like grandmasters では、「優れた科学者はチェスの名人と似ている」と述べています。なぜそのようなことが言えるのか、筆者の考えに基づいて日本語で説明しなさい。

設問(6) 本文のタイトルとして最も適当なものを、(イ)~(ヘ)の中から一つ選び、記号で答えなさい。

(イ) Artificial intelligence and animal intelligence

(ロ) How to solve well-defined problems

(ハ) Human problem solving

(ニ) Neanderthals and *Homo sapiens sapiens*

(ホ) Newton's mechanics and grandmasters

(ヘ) Solutions to chess problems

Ⅲ 「何事もあきらめが肝心」と言われますが、一方で、「あきらめなければ、必ず道は開ける」という言葉もあります。あなたの考えはどちらに近いですか。あなたの過去の経験を1つ挙げて、70語程度の英文で述べなさい。

Ⅳ 次の日本文(A)と(B)のそれぞれの下線部の意味を英語で表しなさい。ただし、(B)では、文学部の志願者は(イ)を、文学部以外の学部の志願者は(ロ)を選んで解答しなさい。

(A) (すべての学部の志願者)

油井にとって宇宙ステーションから見た地球や星々は、想像をはるかに超える美しさであった。「あの薄い窓を隔てた外側は死の世界なんですね。宇宙の闇はあまりに深く、そして、その死の世界に言葉にならないほど美しい地球があるんです。とりわけ私にその感情を呼び起こさせたのは、地球を取り巻く大気の薄さでした。周囲は真っ暗な死の世界であるのに、地球は生物で満ち溢れている。」

(B)

(イ) (文学部の志願者)

言葉は必ず、誰かから習っているのであって、その人だけのユニークな部分は、ほぼゼロなのです。使う言葉も、だいたい辞書に載っているような、決まった意味のものを使うことになっている。文法も、ほかの人がわかるように言わなければならないから、特に変わったところはない。語彙も文法も、その人だけの独自なところは、まあ、ないのです。誰でも言いそうなことばかり毎日言っているのに、なぜ、その人独自のユニークさが現れているのだろう。

(ロ) (文学部以外の学部の志願者)

自分が読みたい本を読む、これが私の読書の鉄則ですが、その際に、^{まぐち}間口をできるだけ広くしておいたほうが良いとも思っています。

本との出会いは、ある種、宝物を掘り出すようなものです。宝はどこに埋まっているかわかりません。いつもと違う道を歩いていて、石ころに^{けつまず}蹴躓いて倒れたら、そこに宝が落ちていたなんてこともあるかもしれない。それゆえ、少しでも興味のある分野の本なら、当面の仕事や勉強に役に立たなくても、まずは手に取ってみるくらいに「心を開いていること」が大切です。

