令和６年度　第３学年入学者選抜学力試験問題

一　般　科　目

英　語

注　意　事　項

1　試験開始の合図があるまで，この問題用紙を開いてはいけません。

2　問題用紙は４ページで，解答用紙は２ページあります。試験開始の合図があってから確かめなさい。

3　監督者の指示に従い，解答用紙の各ページに受験番号を記入しなさい。氏名を書いてはいけません。

4　文字などの印刷に不鮮明なところがあった場合は，手を挙げて監督者に知らせなさい。

5　解答はすべて解答用紙に記入しなさい。ただし,「総得点欄」「採点欄」「得点欄」に記入してはいけません。

6　問題用紙の余白は下書きとして利用してかまいません。

7　試験終了後，配付された問題用紙は持ち帰りなさい。

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問　題　用　紙
(　　英　語　　)

問題 1　次の英文は地震に関する説明です。下線部(1)から(5)について，文脈に適合するように，下記の Example/Answer を参考に [　　] 内の要素を並べ替え，記号を用いて答えなさい。（※文末に注あり）

Example:
All of us can see [(a) nectar　(b) bees　(c) to gather　(d) flying] in the garden.
Answer:
All of us can see [(　b　) - (　d　) - (　c　) - (　a　)] in the garden.

Scientists use a machine called a seismometer to measure the strength of an earthquake. A seismometer draws lines back and forth (1)[(a) long rolls　(b) that　(c) on　(d) are　(e) of paper] always moving. The stronger the earthquake, the wider the lines are.

We determine an earthquake's strength by (2)[(a) it　(b) observing　(c) energy　(d) much　(e) how] puts out when it strikes. Devices called sensors help scientists figure out the power of the shaking. Then they give this power a number value based on something called the moment magnitude scale. This scale tells the size of the quake. A very strong earthquake would rate 7.0 or higher on the moment magnitude scale, while a small one might rate around 2.5.

Scientists cannot tell way (3)[(a) of　(b) if　(c) an earthquake　(d) time　(e) ahead] is going to happen. Even sensors near busy earthquake zones detect slight tremors only about a minute or so before a powerful quake hits. The sensors are connected to emergency systems that send out alert messages to nearby towns and cities. People do not have much time to react.

In years past, buildings and bridges often crumbled during strong earthquakes. This has caused the deaths of thousands of people. In recent years, however, architects and engineers have become much better at something called earthquake-resistant design. This is a way (4)[(a) hold　(b) better able to　(c) buildings, bridges, and other structures　(d) to　(e) make] up against the force of earthquakes. One way is to use dampers, which are like large springs. Dampers allow a building or a bridge to move gently during a quake, and they also absorb much of the earthquake's energy.

Builders also use building material that can flex without breaking easily. Believe it or not, steel and iron are fairly flexible. Something like concrete is more brittle and (5)[(a) than　(b) crumble　(c) rather　(d) bend　(e) will].

(adapted from *Why Do Earthquakes Happen?*)

注　seismometer: 地震計　　　brittle: (固いが)もろい

問題2 次の英文は鳥の移動に関する説明です。下線部(1)から(5)に入れるのに最も適切なものを下の(a)から(e)の中から一つずつ選び，その記号で答えなさい。（※文末に注あり）

Man has been fascinated by the migration of birds since the very beginning of history—did you know it is even mentioned in the Bible?

And yet, so many thousands of years later, we still don't have all the answers. By migration, we mean the movement of birds south in the autumn and north in the spring, or moving from lowlands to highlands, or from inland to the coast.

We know that some go to warmer climates because they couldn't survive winter conditions. (__1__). Whatever the reason is, how do they actually know when to make this long flight? It is believed that birds can tell when the days get shorter (and longer in spring) and that this acts as an 'alarm clock' to tell them that it is time to move along.

(__2__). There are many other factors involved, of course, and many things we still don't understand, but these are certainly the main reasons why birds migrate.

Now that we know why birds migrate, the next question is how far they actually fly to find better conditions.

The champions among birds that migrate are the arctic terns. (__3__). They nest over a wide range from the Arctic Circle to as far south as Massachusetts. It will take this bird about twenty weeks to make its trip down to the antarctic region, and it averages about 1,000 miles a week.

Most land birds only make short journeys during their migrations. But there is one bird, the American golden plover, that makes a long nonstop flight over the open ocean. (__4__).

We are not certain that birds start and end their migrations on exactly the same day each year. (__5__). It is said that the famous swallows of Capistrano, California, are thought to leave on October 23 and return on March 19, but of course their date of departure and arrival has been found to vary from year to year.

(adapted from *Tell Me How?*)

(a) It may fly from Nova Scotia directly to South America, a distance of about 2,400 miles, without even stopping

(b) These amazing birds will travel as much as 22,000 miles during the course of a year, going back and forth

(c) But there is one bird who comes pretty close to it

(d) So it is the change in the length of the day and the disappearance of food that tell the bird to head to warmer places

(e) Also those birds that feed on certain insects, or small rodents, wouldn't find any food in winter

注　migration: (鳥などの)移動，渡り　　arctic tern: [鳥]キョクアジサシ　　Arctic Circle: 北極圏
American golden plover: [鳥]アメリカムナグロ　　rodent: げっ歯類

問題3　次の研究者数に関するデータに基づいて，下の英文の下線部(1)から(8)に入る最も適切な国名を表の中から選び，英語で記入しなさい。

Researchers per million inhabitants

(unit: persons)

Countries	2015	2016	2017	2018
Denmark	7,528.3	7,846.7	7,669.9	7,636.1
Guatemala	22.2	22.1	14.1	12.9
Ireland	5,270.7	5,178.2	5,142.8	4,733.2
Japan	5,173.0	5,209.4	5,304.1	5,331.2
Republic of Korea	7,013.5	7,086.4	7,497.6	7,980.4
Russian Federation	3,098.1	2,952.2	2,821.5	2,784.3
Thailand	864.7	1,208.5	1,350.3	1,758.1

(adapted from data provided by The UNESCO Institute for Statistics)

The table above shows the number of researchers per million inhabitants for seven countries. Figures are provided for the years 2015 through 2018.

There is a broad range of figures, from well over 7,000 to well below 100. Moreover, there is no single clear trend during the years provided. The figures for Republic of Korea and Thailand rose every year, and this was also the case for (__1__). On the other hand, the figures for Guatemala and Russian Federation dropped every year, as they did for (__2__). By 2018, the figure for (__3__) had fallen to a little more than half of the figure for 2015. (__4__), however, experienced a fairly dramatic increase, as the figure for 2018 was more than double that for 2015.

A further examination of the 2015 and 2018 figures for each country reveals that four countries had a higher ratio of researchers in 2018 than in 2015: (__5__) and the three countries whose ratio increased each year. By contrast, three countries had a lower ratio of researchers in 2018 than in 2015: Guatemala; Ireland; and (__6__).

Although (__7__) had the highest figure from 2015 through 2017, by 2018 that honor belonged to (__8__).

問 題 用 紙
(英 語)

問題4 次のソーシャルメディアに関する意見を読み，下の問いに答えなさい。（※文末に注あり）

　　Billions of people around the globe use social media platforms to make sense of their world. Companies such as Meta, Twitter and TikTok control these forums but face little public oversight or accountability. Despite collecting vast amounts of data about every interaction that takes place on their pages, they share little information with researchers, (ア) understanding the effects of social media on individuals and society. After two decades of minimal regulation and many significant crises, it is time to require more transparency from social media companies.

　　We are particularly concerned about the way social media has become a conduit for the spread of (イ) information about every issue of concern to society, including the U.S. 2020 election, the January 6 Capitol insurrection, the COVID pandemic and the war in Ukraine. We don't know what the next crisis will be, but (1)we do know that when it happens, false claims about it will circulate on these platforms.

　　Social media companies have (ウ) extensive internal research about misinformation and polarization on their platforms. Unfortunately, they are (2)stingy about releasing data and publishing research, especially when the findings might be unwelcome (although notable exceptions exist). To enable public understanding of what is happening on the platforms, lawmakers and regulators must require social media companies to release data to independent researchers, especially data on the *structures* of social media—such as content-recommendation algorithms—so we can better analyze their effects.

　　For example, platforms have assured legislators that they are taking steps to counter misinformation and disinformation such as flagging content and conducting fact-checks. (エ) Without independent evaluations, we run the risk of creating laws and regulations that do not adequately address harms or that inadvertently make problems worse.

(adapted from *Scientific American, December 2022*)

注　　oversight: 管理　　interaction: やりとり　　conduit: ルート　　Capitol insurrection: 議事堂襲撃事件　　polarization: 二極化
　　　evaluation: 評価　　inadvertently: 不注意に

問1　(ア)から(エ)に入れるのに最も適切なものを，それぞれ下の(a)から(d)の中から一つずつ選び，その記号で答えなさい。
　　(ア) (a) allowing for　　(b) instead of　　(c) resulting in　　(d) preventing us from
　　(イ) (a) false and misleading　　　　　　(b) correct and understandable
　　　　(c) complex but important　　　　　　(d) crucial but unfavorable
　　(ウ) (a) avoided　　(b) criticized　　(c) conducted　　(d) requested
　　(エ) (a) What are the societal values that they should have supported?
　　　　(b) They have made every effort to support societal values and users' privacy.
　　　　(c) They are making no effort to support societal values and users' privacy.
　　　　(d) Are these efforts effective? Do they support societal values and users' privacy?
問2　下線部(1)を，二つの it が指す内容をどちらも明示して日本語に訳しなさい。
問3　下線部(2)の意味に最も近いものを，下の(a)から(d)の中から一つ選び，その記号で答えなさい。
　　(a) unhelpful　　(b) generous　　(c) impolite　　(d) humble
問4　英文の主旨として最も適切なものを，下の(a)から(d)の中から一つ選び，その記号で答えなさい。
　　(a) the method of collecting data about interactions on social media
　　(b) the need for greater transparency from social media
　　(c) social issues discussed on social media platforms
　　(d) false information found on social media platforms