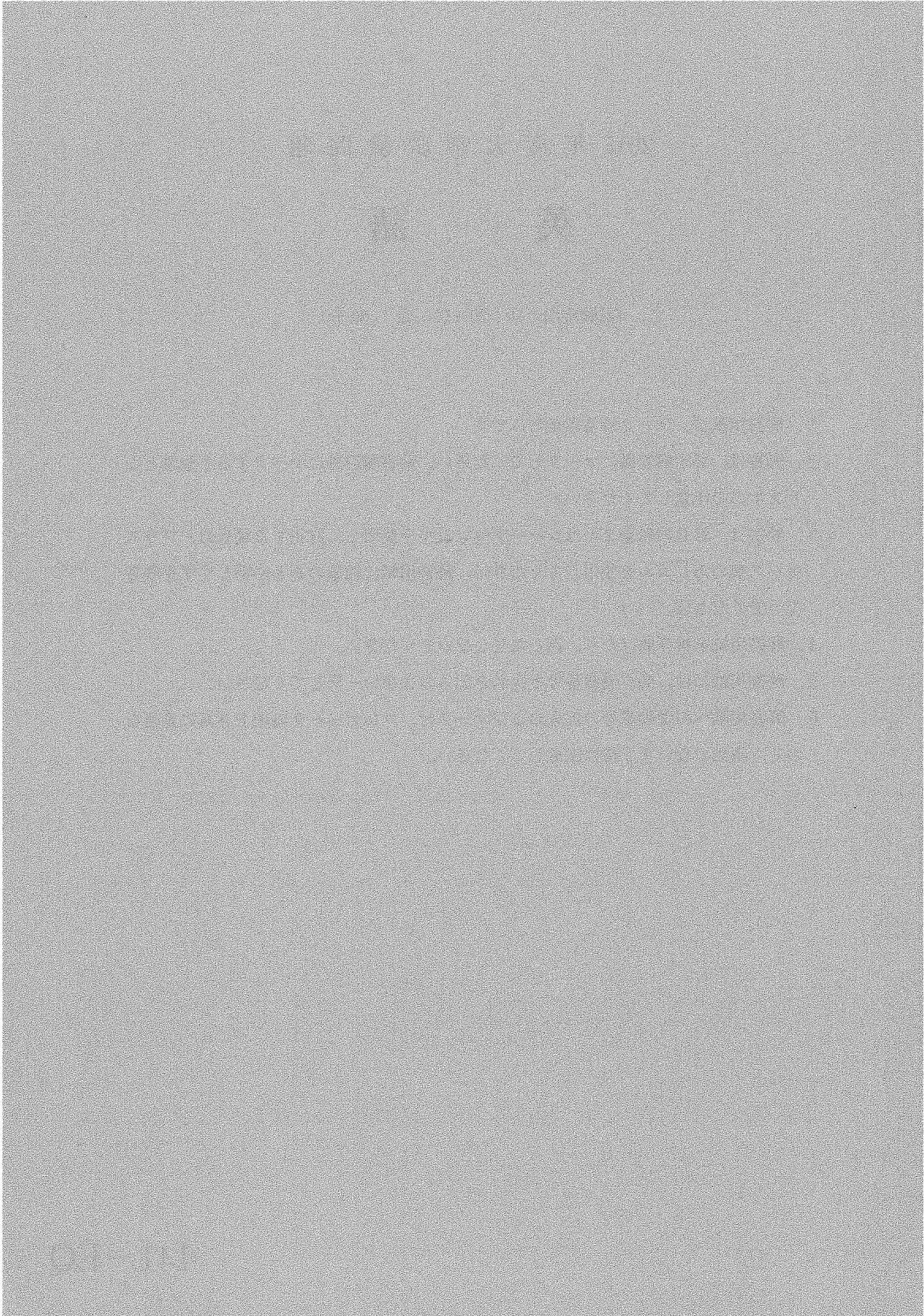


## 2017 年度 入学 試験 問題

# 英 語

(試験時間 10:30~11:50 80分)

1. 解答用紙は、マーク解答用紙のみです。
2. 解答は、必ず解答欄にマークしてください。解答欄以外にマークすると無効となりますので注意してください。
3. 解答は、HBの鉛筆またはシャープペンシルを使用し、訂正する場合は、プラスチック製の消しゴムを使用してください。解答用紙に鉛筆のあとや消しくずを残さないでください。
4. 解答用紙を折り曲げたり、汚したりしないでください。
5. 解答用紙には、必ず受験番号と氏名を記入およびマークしてください。
6. 解答用紙への受験番号の記入およびマークは、コンピュータ処理上非常に重要なので、誤記のないよう特に注意してください。



I 次の英文を読み、設問に答えなさい。(20点)

A well-known scientific hypothesis that turned out to be incorrect was that of the greatly respected Greek philosopher Aristotle (384-322 BC), who claimed that heavy objects naturally fall faster than light objects. This hypothesis was considered to be true for nearly 2000 years — mainly because nearly everyone who knew of Aristotle's conclusions had such great respect for him as a thinker that they simply assumed he (あ). Also, in Aristotle's time, air resistance was not recognized as an influence on how quickly an object falls. We've all seen that stones fall faster than leaves fluttering in the air. Without investigating further, we can easily accept false ideas.

Galileo very carefully examined Aristotle's hypothesis. Then he did something that caught on and changed science forever. He *experimented*. Galileo showed the falseness of Aristotle's claim with a single experiment — dropping heavy and light objects from the Leaning Tower of Pisa. Legend tells us that the objects fell at equal speeds. In the scientific spirit, one experiment that can be reproduced outweighs any authority, regardless of reputation or the number of advocates.<sup>(い)</sup>

Scientists must accept their experimental findings even when they would like them to be different. They must strive to distinguish between the results they see and those they wish to see.<sup>(う)</sup> This is not easy. Scientists, like most people, are capable of fooling themselves. People have always tended to adopt general rules, beliefs, creeds, ideas, and hypotheses without thoroughly questioning their validity. And sometimes we retain these ideas long after they have been shown to be meaningless, false, or at least questionable. The most widespread assumptions are often the least questioned.<sup>(え)</sup> Too often, when an idea is adopted, great attention is given to the instances that support it. Contrary evidence is often distorted, belittled, or ignored.<sup>(お)</sup>

The fact that scientific statements will be thoroughly tested before they are

believed helps to keep science honest. Sooner or later, mistakes (or deceptions) are found out. A scientist exposed for cheating doesn't get a second chance in the community of scientists. Honesty, so important to the progress of science, thus becomes a matter of self-interest to scientists.

設問

1. 空所 ( あ ) に入る最も適当なものをA～Dより1つ選び、その記号をマークしなさい。  
A. could be a fraud    B. couldn't be wrong    C. could be false  
D. couldn't be right
  
2. 下線部(い)の outweighs の意味に最も近いものをA～Dより1つ選び、その記号をマークしなさい。  
A. is valued above    B. is overpowered by    C. is overthrown by  
D. is less reliable than
  
3. 下線部(う)の文の意味に最も近いものをA～Dより1つ選び、その記号をマークしなさい。  
A. They must avoid drawing a clear line between the results they see and those they want to see.  
B. They must give priority to the results they wish to see over those they actually see.  
C. They must not separate the results they see from those they wish to see.  
D. They must make a clear distinction between the results they see and those they desire to see.

4. 下線部(ス)の the least questioned の意味に最も近いものを A～D より 1 つ選び、その記号をマークしなさい。
- A. what are questioned by most people
  - B. those which are least doubted
  - C. what are not reliable in the least
  - D. those that are at least questionable
5. 下線部(ホ)の意味に最も近いものを A～D より 1 つ選び、その記号をマークしなさい。
- A. Contrary evidence is often accepted
  - B. Concrete evidence is often respected
  - C. Evidence to the contrary is often twisted
  - D. Evidence to support the idea is often disregarded
6. 第 4 段落 (最終段落) の内容に一致するように、次の英文の空所 ( ア ) ～ ( ウ ) に入る最も適当なものを A～D よりそれぞれ 1 つ選び、その記号をマークしなさい。

Mistakes (or deceptions) in scientific statements are sooner or later ( ア ) and ( イ ) scientists are found cheating in their statements, it becomes difficult for them to survive in the scientific community. Thus, to scientists, honesty becomes a matter that ( ウ ) their own interests.

ア. A. revealed    B. believed    C. deleted    D. overlooked

イ. A. unless    B. until    C. once    D. no

ウ. A. contradicts    B. escapes    C. reduces    D. affects

7. 本文の内容と一致するものをA～Dより1つ選び、その記号をマークしなさい。

- A. Aristotle claimed that stones and leaves naturally fall at equal speeds.
- B. In Aristotle's time, people already recognized that air resistance had an influence on the speed of a falling object.
- C. Galileo experimented and changed science forever.
- D. Galileo proved the validity of Aristotle's claim by dropping heavy and light objects from the Leaning Tower of Pisa.

II 次の英文を読み、設問に答えなさい。(20点)

Do you ever feel that as you get older, every year seems to go by quicker? This speed only seems to be increasing, especially with social media. Every news update, comment and “like” floods us with information about someone’s success, their amazing holiday or the delicious food they’ve eaten. And it can sometimes make you feel like everyone else’s life is electronically flashing past your eyes, leaving you behind.

For some people, when they see all these experiences, they can feel a lot of pressure to keep up with the lives of others. They don’t want to miss any opportunities to be social, to try unusual things or to make or save money. A person with a bad case of this anxiety is a person with FOMO — the fear of missing out. They tend to be worried that they will make the wrong decision, not have the latest gadget, or not share the latest and greatest experience.

<sup>(あ)</sup> The pressure not to miss out on the latest thing is something I’ve noticed in Japan particularly. On a lot of food and drink packaging are four kanji that mean: FOR A LIMITED TIME ONLY. And in many restaurants, I now notice another four kanji that mean: LIMITED NUMBER AVAILABLE. It’s a great way to get customers to buy these things, as we’re often told to live life to its fullest and to grab every opportunity that we can, because we could die tomorrow.

I’ve developed a new perspective on this need to never miss an opportunity ever since an encounter with a pack of deer in Nara. I wouldn’t call it a near-death experience, but it was pretty frightening.

I had wandered away from my friends to take some photos, and as I was checking my shoe for deer droppings, I heard a bang and then what sounded like rolling thunder. I looked up to see a large herd of deer running directly towards me at full speed. I froze and thought: “Is this it? Is this how I’m going to die? Trampled by panicking Nara deer while checking my shoes for deer droppings?

Not even killed by a predatory animal? Really?"

Thankfully, the deer were smarter than me and turned away at the last second. I didn't see my life, or anyone else's flash past my eyes. I only felt grateful that I had spent most of my day with friends. And it made me realise — we never really miss out on anything, because life is already full of everything. So, instead of trying to look for something new, we should pay attention to what we have now. Yes, life is for a limited time only, but the ways to fill it? Well, those are unlimited.

設 問

1. 下線部(あ)の the latest gadget の意味に最も近いものを A～D より 1 つ選び、その記号をマークしなさい。  
A. the newest device    B. the closest friend    C. the best chance  
D. the most delicious food
2. 下線部(い)の文の意味に最も近いものを A～D より 1 つ選び、その記号をマークしなさい。  
A. Life is limited, but the things that make it painful are unlimited.  
B. Life is long but filled with lots of fun.  
C. Life is limited in time to be sure, but the means to fill it are unlimited.  
D. Life is boring to be sure, but the ways to make it pleasant are unlimited.



3. 1)~3)の英文が本文の内容と一致するように、空所に入る最も適当なものをそれぞれA~Dより1つ選び、その記号をマークしなさい。

1) People with FOMO have the fear of ( ア ). They tend to ( イ ) that they will make the wrong decision, not have the latest gadget or not share the latest and greatest experience.

- ア. A. being the subject of rumour
- B. becoming the object of attention
- C. having a quarrel with others
- D. losing opportunities

- イ. A. have concerns    B. show it off    C. deny the fact
- D. cherish the hope

2) To write “FOR A LIMITED TIME ONLY” on food and drink packaging is a great way to get customers to ( ア ), as we’re often told to live life to its fullest and to ( イ ), because we could die ( ウ ).

- ア. A. know the “consume by” dates of these things
- B. know the best time to consume these things
- C. purchase these products
- D. return these products

- イ. A. refrain from buying
- B. seize whatever chance we can
- C. take a wait-and-see attitude as much as possible
- D. leave any opportunity to others when we can

- ウ. A. once in a while    B. for the time being    C. for the moment
- D. at any time

3) What the author thought, based on the experience of being scared by ( ア ) in Nara, is that ( イ ).

- ア. A. a predatory animal    B. a large herd of panicking deer  
C. a thunderstorm    D. lots of speeding motorbikes

- イ. A. we really miss out on good opportunities  
B. we spend most days on something meaningless  
C. we should try to avoid going to Nara again  
D. we should turn towards the things that we have now

III 次の英文を読み、設問に答えなさい（\*印の語は〔注〕を参照しなさい）。(20点)

When you come down with a bad cold, do you drag yourself to the health center to ask for some \*antibiotics? If you do, you have probably noticed that physicians are increasingly unlikely to prescribe antibiotics, especially for illnesses such as colds and flu. (These maladies are caused by viruses and are thus not readily cured by antibiotics, which target bacteria.) This increased caution stems from fears that overuse of antibiotics has contributed to the rise of drug-resistant bacteria.

The bacteria that cause disease are becoming less susceptible to antibiotic drugs. For example, more than half of the skin infections treated in U.S. emergency rooms are caused by bacteria that do not respond to formerly effective antibiotics. Drug resistance has also appeared in the bacteria that cause \*tuberculosis, a disease that kills almost 2 million people each year. Although tuberculosis can be deadly, it is generally treatable. In an increasing number of cases, however, the disease does not respond to any of the drugs commonly used to treat it. Such multidrug-resistant tuberculosis is extremely difficult, sometimes impossible, to cure.

Multidrug-resistant tuberculosis is a frightening and increasingly widespread threat to public health in many parts of the world, including the United States. Drug resistance is also becoming common in many other dangerous bacteria. We are experiencing a global increase of resistant “supergerms,” and are facing the threat of diseases that cannot be cured, even by our best medicines.

Many physicians and scientists believe that the most effective way to combat the rise of resistant diseases is to reduce the use of antibiotics. Why might such a strategy be effective? Because the upsurge of antibiotic resistance is a consequence of evolutionary change in populations of bacteria, and the agent of this change is natural selection applied by antibiotic drugs. To understand how this crisis arose and to devise a strategy to resolve it, we must have a clear

understanding of the mechanisms by which populations evolve.

\*〔注〕 antibiotics 抗生物質 tuberculosis 結核

設 問

1. 下線部(ア)~(エ)の意味に最も近いものをA~Dよりそれぞれ1つ選び、その記号をマークしなさい。

(ア) stems from

- A. retreats from    B. refrains from  
C. results from    D. resigns from

(イ) has contributed to

- A. has been a reason for    B. has been contradictory to  
C. has helped to curb    D. has nothing to do with

(ウ) can be deadly

- A. can foresee death    B. can avoid death  
C. can overcome death    D. can cause death

(エ) upsurge

- A. gradual shrinking    B. increasing downturn  
C. decreasing uptrend    D. steep increase

2. 下線部(あ)の文の意味に最も近いものをA～Dより1つ選び、その記号をマークしなさい。

A. The bacteria that cause disease are becoming less resistant to antibiotic drugs.

B. The bacteria that cause disease are becoming more resistant to antibiotic drugs.

C. Antibiotic drugs are becoming more effective to the bacteria that cause disease.

D. Antibiotic drugs are as effective as ever to the bacteria that cause disease.

3. 本文の内容と一致するものをA～Dより1つ選び、その記号をマークしなさい。

A. Antibiotics are very effective to cure maladies such as colds and flu which are caused by viruses.

B. More than half of the skin infections treated in U.S. emergency rooms can be cured by formerly used drugs.

C. Now drug resistance is commonly found in many dangerous bacteria including those that cause tuberculosis.

D. Many physicians and scientists believe that they need to prescribe more antibiotics to halt the rise of resistant diseases.

4. 本文の内容と一致するように、次の英文の空所（ア）～（ウ）に入る最も適当なものをA～Dよりそれぞれ1つ選び、その記号をマークしなさい。

The (ア) of antibiotics has led to the rise of drug-resistant bacteria that (イ) formerly effective antibiotics. Now we are (ウ) the threat of drug-resistant diseases that cannot be cured, even by our best medicines.

ア. A. price increase    B. increased use    C. short supply  
D. limited availability

イ. A. do not respond to    B. cannot resist    C. can be eliminated by  
D. are weak to

ウ. A. not under    B. free from    C. protected against  
D. exposed to

IV 次の英文を読み、設問に答えなさい。各段落には参照を容易にするために(1)~(5)の番号がふってある (\*印の語は〔注〕を参照しなさい)。(24点)

(1) Scientists have created a scent-delivery system that releases a pleasant \*fragrance when you sweat. Apply it to the skin, and the more you sweat the better you'll smell. That's because the perfume only gets released upon contact with moisture.

(2) Chemists at Queen's University Belfast in Northern Ireland combined two compounds to create their new system. One chemical is alcohol-based. This is the nice-smelling perfume. The other chemical is an ionic liquid. It's a type of salt that is liquid at room temperature. Ionic liquids are made of ions — molecules that have lost or gained one or more electrons. If the molecule loses electrons, it will have a positive charge. If it gains electrons, it gets a negative charge. Ionic liquids contain the same number of positive and negative ions. This makes the liquid neutral, with no overall electric charge. In general, ionic liquids also have no smell.

(3) When the perfume and ionic liquid are mixed together, a chemical reaction occurs. This bonds the molecules to each other. The reaction also temporarily inactivates the perfume's molecules. So when applied to the skin, the new perfume initially has no scent. But adding water —or sweat— breaks the bond between the molecules. That releases the scent into the air. The researchers experimented with two different fragrances. One smelled \*musky. The other had a sweet, fruity smell. "The rate of release of the fragrance material depends on how much you sweat, in other words how much water is available," explains chemist Nimal Gunaratne. "Sweat is like the command to let the fragrance go." Gunaratne works at the university's Ionic Liquid Laboratories. He led the new research.

(4) Other chemists have created similar systems that release a fragrance after contact with water that has a very alkaline or very acidic pH. Because sweat is

only slightly acidic, they would not release enough of the fragrance to work as a perfume. Gunaratne's system on the other hand, will release its fragrance in the presence of any water — acidic, alkaline or neutral.

(5) Gunaratne's system has opened the door to new developments and applications of fragrance controlled-release systems. These new systems allow small quantities of a compound that they hold to slowly enter the environment. Some systems implanted in the body can slowly release a drug over time. Others might slowly release a chemical into the air or soil. Gunaratne and his team described their research on these new systems in a recent issue of the journal *Chemical Communications*.

\*〔注〕 fragrance 香り musky ジャコウのような（香りのする）

#### 設 問

1. 本文の内容と一致するように、次の英文の空所に入る最も適当なものをA～Dよりそれぞれ1つ選び、その記号をマークしなさい。

- ア. Ionic liquids are neutral because they \_\_\_\_\_.
- A. hold an equal number of positive and negative ions
  - B. lose one or more electrons at room temperature
  - C. will become salty and smelly at room temperature
  - D. are nice-smelling, alcohol-based perfumes
- イ. In Gunaratne's fragrance controlled-release system \_\_\_\_\_.
- A. the fragrance that smells musky cannot be released
  - B. the more water is added the more fragrance is released
  - C. adding water keeps the molecules tightly bound
  - D. sweat can break the bond but water cannot



ウ. The advantage of Gunaratne's system is that it will \_\_\_\_\_.

- A. not release its fragrance with slightly acidic water
- B. release its fragrance without any water
- C. not release its fragrance without acidic water
- D. release its fragrance with any water

2. (4)の段落の内容と一致するように、次の英文の空所 ( ア ) ( イ ) に入る最も適当なものをA~Dよりそれぞれ1つ選び、その記号をマークしなさい。

The systems created by other chemists can release a fragrance with water that has a very alkaline or very acidic pH. However, there would be ( ア ) in the amount of fragrance coming out to make it a good perfume because sweat ( イ ).

ア. A. an abundance      B. a suitable quantity

C. a shortage      D. scarcely trouble

イ. A. has a very acidic pH

B. has a slightly acidic pH

C. is very strong alkaline

D. has a slightly alkaline pH

3. (5)の段落の下線部(あ)の意味に最も近いものをA～Dより1つ選び、その記号をマークしなさい。

- A. These new systems can prevent small quantities of a compound from entering the environment.
- B. These new systems can stock a compound in the container so that it will not leak into the environment.
- C. These new systems make it possible for small quantities of a compound to slowly enter the environment.
- D. These new systems make it possible to create a new drug using only small quantities of a compound.

4. 本文の内容と一致するように、次の英文の空所 ( ア ) ～ ( オ ) に入る最も適当なものをA～Gより1つ選び、その記号をマークしなさい。

Scientists have developed a fragrance-delivery system which works when you sweat. To create the new system they combined ( ア ). One is the nice-smelling perfume and the other is ( イ ). When these two chemicals are mixed together, ( ウ ) occurs, bonding the molecules to each other. So the fragrance doesn't come out immediately. However, when you sweat, it breaks the bond and releases ( エ ) into the air. In short, ( オ ) acts like the command to let the fragrance go. This is how sweat makes you smell sweeter.

- A. a chemical reaction    B. the skin    C. sweat
- D. an ionic liquid    E. the scent    F. an offensive smell
- G. two compounds

V 次の1～4の英文が日本文の意味になるようにA～Fの語のうち5つを使って空所を補い、最も適当な文を完成させなさい。ただし、同じ語を繰り返して使用することはできない。答えは、空所（ア）（イ）に入る語の記号のみをマークしなさい。(16点)

1. 政府はその伝染病が全国に広がるのを防ぐためあらゆる対策を講じた。

The government ( ) every (ア) ( ) ( ) the epidemic (イ) spreading across the country.

- A. prevent    B. from    C. to    D. measure    E. took  
F. recession

2. その事故の生存者がいるかどうかまだ確認されていない。

It has (ア) to ( ) (イ) ( ) there are any ( ) of the accident.

- A. be    B. survivors    C. confirmed    D. whether    E. yet  
F. already

3. 世論調査を受けた60パーセント以上の人がある増税の提案に反対だと述べた。

Over 60% of those (ア) ( ) they ( ) (イ) the ( ) tax increases.

- A. proposed    B. against    C. said    D. from    E. were  
F. polled

4. 今では当たり前のこととされているが、大学教育はかつては少数の人に限定されていた。

Although now (ア) for (イ), university ( ) was once ( ) (B) a small number of people.

- A. granted    B. to    C. education    D. limited    E. taking  
F. taken

(設問は前ページまで。以下、白紙)

