

I 次の英文を読んで、以下の設問に答えなさい。（* で示した語については、本文の下のを参照。）

It is known that many different kinds of viruses cause colds, but discovering how these viruses pass between people has been particularly difficult. Researchers at the time of the First World War were able to demonstrate that a cold could be (1) induced by taking a concentrate from the nasal secretions* of someone who has an active cold and placing it directly into either the nose or the eyes of a healthy person. (The virus placed in the (2) by / down / eye / nose / the / into / runs the tear ducts*.) Then, in the 1940s, high-speed flash photographs demonstrated that an ordinary sneeze expels droplets* by the thousands from the nose and mouth at velocities* approaching 100 miles per hour. A British study published in *The Lancet* reported that a culture plate placed three feet from a sneezing subject would collect more than 19,000 bacterial colonies. Thus, the conclusion that colds were transmitted through the air was taken as more or less self-evident. In the summer of 1950, Sir Christopher Andrewes conducted an experiment in order to test (3) this hypothesis.

Twelve volunteers were sent to live in a group of houses on Eilean nan Ron, an otherwise uninhabited island off the northern coast of Scotland. After the volunteers had been (4) isolated for 10 weeks, six other volunteers who had recently been infected with colds were introduced into the island. The infected group first spent three hours in an empty room in one of the houses, where they were encouraged to cough and sneeze as much as they wanted. Half an hour after they left, four of the island dwellers, (5) designated Group A, were brought in to occupy the (6) contaminated room. The infected group then entered a second room. Here Group B was present but was separated from them by a blanket that had been stretched across the room, with space above and below to allow air to pass freely. The experimental group and the infected group shared the room for several hours. Testing demonstrated that fine droplets from the infected group had indeed travelled throughout the room. Finally, the infected group went to a separate house, where they lived with the third experimental group, Group C, for three days, providing maximum exposure.

The subjects were then closely monitored for colds over the next few days. This monitoring revealed that no one in any of the experimental groups developed a cold. This outcome needs to be interpreted with caution, however, since the numbers involved in Sir Christopher Andrewes's experiment were very small; there were only (7) subjects in each experimental group. It is also true that he did not actually discover how colds are transmitted from person to person. Nevertheless, his results suggest that the transmission of the cold virus through the air is one means of infection that can probably be (8).

(出典 Paul Rossiter. *First Moves*. Tokyo: University of Tokyo Press; 2004: pp.70-71.

Cold Comfort by Atul Gawande, *The New Yorker*, March 11, 2002)

(注) nasal secretion 鼻汁 tear duct 涙管 droplet 飛沫 velocity 速度

英

英語

問1. 下の1～4の動詞は本文中の下線部(1)～(4)で過去分詞として使われている。この1～4の動詞(原形)を使って以下の英文A～Dの空所を埋めなさい。(番号で解答し、それぞれの番号は一度のみ使用すること。)

1. induce 2. isolate 3. designate 4. contaminate

- A. They are planning to () the battle field as a national monument.
 B. These bacteria grow very quickly and may () our food.
 C. A good pillow will help () a night of deep and relaxing sleep.
 D. This decision will () the country from the rest of Europe.

問2. 下線部(あ)の語を意味が通るように並べ替えなさい。

問3. 下線部(い) this hypothesis が指している連続した6語を本文中より抜き出しなさい。

問4. 空所(う)に入る1語を本文中より抜き出しなさい。

問5. 空所(え)に入る最も適当な語句を1～4より選び、その番号を書きなさい。

1. dealt with 2. ruled out 3. taken in 4. thought over

問6. 1～5の記述のうち、本文の内容と一致するものには○を、一致しないものには×を書きなさい。

1. When people sneeze, they release a large quantity of bacteria into the air.
2. Apart from the subjects of the experiments, no one was living on the Scottish island.
3. When the 12 volunteers arrived on the island, they had already been infected with colds.
4. The volunteers in Group B and the people with colds breathed the same air but did not touch each other.
5. The volunteers in Group C had the least contact with the people with colds.

II 日本文の意味に合うように英文中の空所を1～6の語で補う場合、(A)～(H)に入る語の番号を書きなさい。なお、先頭に来るべき語も小文字で記してある。

突然彼は部屋からとび出した。

All () a (A) () (B) () of the ().

1. he 2. of 3. out 4. room 5. rushed 6. sudden

切符を買ってくるあいだ、私のスーツケースを見ていてください。

Please (C) an eye () my () (D) I () my ().

1. get 2. keep 3. on 4. suitcase 5. ticket 6. while

私はあらかじめすべてを準備してから床についた。

I () to () (E) () everything () (F).

1. advance 2. after 3. bed 4. in 5. preparing 6. went

彼がとても重要な人物であることを私は確かに知っている。

I () for (G) () he is () () of great (H).

1. a 2. certain 3. importance 4. know 5. man 6. that

III (1)～(4)の英文中の空所に入る最も適当な語(句)を1～4より選び、その番号を書きなさい。

(1) Ken, why don't you take some time off? You () too hard lately.

1. would work 2. had worked 3. should have worked 4. have been working

(2) E-mail is a convenient way () we communicate with people in other countries.

1. which 2. by which 3. from which 4. of which

(3) This air conditioner uses () that one.

1. as half much electricity as 2. much as half electricity as 3. half as much electricity as
4. half electricity as much as

(4) His ambition to become president is () to be realized.

1. capable 2. likely 3. possible 4. probable