

## 解答はすべて別紙の解答用紙に記入しなさい

〔 I 〕 次の英文を読み、下記の設問（A～C）に答えなさい。

My first high school science class was taught by a delightful woman named Ms. Smith. On the first day of class, she told us <sup>(ア)</sup>what science was all about. This enthusiastic account, which was exciting to me and some other classmates, went as follows.

The revolution in thought which made modern science possible, and which alone has been responsible for all the wonderful scientific knowledge we have today, is based on a simple idea: we have to look at things to find out about them. Most of us walk around in the world not really ( 1 ) things, but we start to be scientists when we learn how to observe things carefully. When you walk home from school today, Ms. Smith urged us, start to *look*. For example, pay attention to the birds you see. How many different ones can you find? See if you can carefully describe the size, shape, and colors of each one. What are they doing? Are they mostly walking around on the ground, or are they on trees or telephone wires? What are they eating? What noises are they making? Don't just look—listen too, and use your other senses. Your job as new scientists is to collect ( 2 ).

Mistakes in science arise, Ms. Smith told us, when people <sup>(イ)</sup>rely on authority or on accepted general views. Because science is the search for truth, real scientists should be *open-minded*—or perhaps “empty-minded” is a better term. Such views on science and scientists were inspiring, and the ideals Ms. Smith emphasized, of objective observation and desire to find the truth, are clearly very important to science. In fact, most people <sup>(ウ)</sup>think of science the way Ms. Smith did, and it has been conventional and dominant for centuries to view science in this way.

( 3 ), over the recent years, most of the philosophers and scientists who have been thinking about how science works have become convinced that this view is not exactly right—that it's too simple, or at least easily leads people to misunderstand, in many respects. Actually, Ms. Smith's own sample questions for little scientists themselves show that she's not quite right about the empty mind with which scientists must begin. She was not, despite her words, instructing us to go out into the world with completely empty minds, and just to look at <sup>(エ)</sup>whatever swam into our field of vision. She was actually suggesting some questions which would guide our observation: questions which would constitute some mental content prior to observation.

This is <sup>(オ)</sup>as it must be. Imagine what it would be like to look at some part of the

world with nothing in your mind to guide what to pay attention to. Suppose, for example, that the first thing that you notice when leaving school is a bird. Ms. Smith tells you to observe carefully; but what facts do you take note of? You might note that there's an animal in front of you, or that it's a sparrow, or that it's facing north, or that it's on the ground, or that it's a sparrow on the ground, or that it's a sparrow on the ground on Tuesday, or that it's brown, or that it's brown and it's 4 PM, and so on and so on. There are in fact an *unlimited* number of facts you might take note of, and if you've followed Ms. Smith's instructions, and have emptied your mind of everything, you'd have no questions or interests to guide your observation. You'd have your choice of any of this endless list to take note of. ( 4 ) Nothing is any more important than anything else. I suppose all you could do would be to try to note as many of these facts as possible. Most of them would have no importance to anyone at all; why would you make this random collection? No scientist approaches the world <sup>(カ)</sup>in this way. It's clear that any scientist must begin with some guiding questions—at least, with the desire to try to answer ( 5 ) questions rather than any of the unlimited number of others.

## 設 問

A. 本文中の空所（１～５）に入れるのに最も適当なものを、それぞれ下記（a～d）の中から１つ選び、その記号をマークしなさい。

- |     |                                |                            |                 |                 |
|-----|--------------------------------|----------------------------|-----------------|-----------------|
| (1) | a. noticing                    | b. wishing                 | c. uttering     | d. dropping     |
| (2) | a. reactions                   | b. funds                   | c. money        | d. observations |
| (3) | a. In addition                 | b. Above all               | c. Consequently | d. Nevertheless |
| (4) | a. Why do you ask them?        | b. Where should you begin? |                 |                 |
|     | c. How can you make it longer? | d. Who will you talk to?   |                 |                 |
| (5) | a. my                          | b. various                 | c. some         | d. most         |

B. 本文中の下線部（ア～カ）が文中で表している内容に最も近いものを、それぞれ下記（a～d）の中から1つ選び、その記号をマークしなさい。

（ア） what science was all about

- a. scientific experiments
- b. scientific discoveries
- c. the essence of science
- d. stories about great scientists

（イ） rely on authority

- a. acknowledge that some people have more power than others
- b. assume that some experts or people in power are correct
- c. depend upon the government to settle a dispute
- d. have the right to determine what is correct

（ウ） think of science the way Ms. Smith did

- a. think that in science the truth is found through objective observation
- b. think that more facts are revealed if more scientists keep on researching
- c. think that scientists inspire people to search for truth
- d. think that theories will be accepted when they are proposed by scientists

（エ） whatever swam into our field of vision

- a. anything that is caught in the water
- b. anything we encounter
- c. whatever moves us to tears
- d. whatever strikes us as strange

（オ） as it must be

- a. out of the question
- b. totally unexpected
- c. beyond our comprehension
- d. a matter of course

（カ） in this way

- a. with a list of selected facts
- b. with more importance on particular questions
- c. without any questions or interests
- d. without any random collection

C. 次の問い (i ~ iii) の答えとして最も適当なものを、それぞれ下記 (a ~ d) の中から 1 つ選び、その記号をマークしなさい。

(i) Which of the following does NOT represent what Ms. Smith taught?

- a. You cannot be a real scientist if you unthinkingly accept what is generally believed.
- b. It is important to study hard what is written in your textbook.
- c. Science is driven by looking at things carefully.
- d. You should use your sense of hearing as well as vision.

(ii) Which of the following would the author be likely to agree to?

- a. Having some questions when you observe things prevents you from gathering correct pieces of information.
- b. It is not necessary to describe things carefully when you try to find out scientific truth.
- c. You must have a thoroughly empty mind to make a significant observation.
- d. You have to have some questions in mind before you begin to observe things.

(iii) According to the author, which of the following would happen if you observe a bird without anything to guide what to pay attention to?

- a. As the observation proceeds, you would begin to doubt experts' opinions.
- b. There would be so many facts that you do not even know which ones to take note of.
- c. You would predict something about the time from the direction the bird is facing.
- d. You would be able to take note of nothing more than the fact that the bird is a sparrow.

〔Ⅱ〕 次の英文を読み、下記の設問（A～C）に答えなさい。

Animals understand a lot more than we might think, but they don't understand as much as we often wish they did. Many humans believe animals understand us so completely that we communicate with them using all <sup>(7)</sup>our resources, including language. And animals respond ( 1 ) our communication in ways that make sense to us. For example, they cock their heads and look at us. At the same time, we also have a natural sense of what they can and can't actually understand. We don't ask them questions related to abstract matters, and we don't ask them their political opinions.

( 2 ) species has its own communication system. The primary human communication system is language. By "language," researchers mean the systematic organization of sounds, words, and grammatical elements that lets us communicate so richly with ( 3 ). They don't typically include body language, facial expressions, gestures, or emotional expressions in the definition of language even though these are clearly connected to how humans communicate. Animals often understand these modes of communication reasonably well.

The words that make up languages ( 4 ) largely of symbolic, random connections between something used to represent and something being represented. There is nothing, for instance, about the string of sounds in the word "cat" that would ( 5 ) someone who didn't know English already to guess the meaning of the word.

Many different species, including dogs, dolphins, and several species of primates\*, are able to make symbolic connections. Consider the commands we often teach our pets and how they respond. For example, dogs learn relatively quickly how to "play dead." They understand that the random string of sounds stands in for a particular action. Some dogs and some primates have learned over 1,000 different words and phrases, and they are able to figure out the meaning of a new word through <sup>(1)</sup>mechanisms that resemble what young humans do as they start to learn the words of their language.

The same species that have learned to interpret these kinds of meaning relationships have also demonstrated that they can understand that putting words in different orders changes the meaning. A dog named Chaser, for instance, understands the difference between "to X, take Y" and "to Y, take X." And a bonobo\*\* named Kanzi can interpret words like "in" and "on" and distinguish between phrases like "put the sand in the bottle" and "put the bottle in the sand."

(ワ) These examples can start to make it seem like animals understand quite a bit of language, but we need to be cautious about this assumption. Importantly, animals' ability to interpret words and word order is basic and limited to relatively few words. It also requires a lot of dedicated training by humans to emerge. While humans understand novel and complex uses of language almost immediately, even the most well-trained animals don't seem able to do so. These limitations make it nearly impossible for animals to fully understand our communication through language.

\*primate : 霊長類

\*\*bonobo : ボノボ (チンパンジー属の霊長類)

## 設 問

A. 本文中の空所 (1～5) に入れるのに最も適当なものを、それぞれ下記 (a～d) の中から1つ選び、その記号をマークしなさい。

- |     |             |             |                |                  |
|-----|-------------|-------------|----------------|------------------|
| (1) | a. for      | b. by       | c. with        | d. to            |
| (2) | a. Much     | b. Every    | c. Many        | d. All           |
| (3) | a. together | b. each one | c. one another | d. other         |
| (4) | a. consist  | b. consists | c. consisting  | d. are consisted |
| (5) | a. make     | b. give     | c. forbid      | d. allow         |

B. 本文中の下線部 (ア～ウ) が文中で表している内容に最も近いものを、それぞれ下記 (a～d) の中から1つ選び、その記号をマークしなさい。

(ア) our resources

- |                                |                                   |
|--------------------------------|-----------------------------------|
| a. manners of speech           | b. methods of producing sensation |
| c. strategies of communication | d. processes of thinking          |

(イ) mechanisms

- |               |           |            |                 |
|---------------|-----------|------------|-----------------|
| a. procedures | b. sounds | c. actions | d. instructions |
|---------------|-----------|------------|-----------------|

(ウ) These examples

- a. animals which are reluctant to learn grammar
- b. animals which are unable to expand their vocabulary
- c. animals which produce sounds similar to human language
- d. animals which react well to commands given by language

C. 次の英文 (a ~ f) の中から本文の内容と一致するものを2つ選び、その記号を各段に1つずつマークしなさい。ただし、その順序は問いません。

- a. Animals can naturally identify questions asking about abstract things.
- b. Some animals can make connections between sounds and expected actions.
- c. A majority of primates and dogs know more than 1,000 words and phrases.
- d. Dogs cannot understand the relationships between word order and meaning.
- e. Kanzi learned to produce words such as “in” and “on” by imitating researchers.
- f. Animals need to receive training to understand the differences caused by word order.

〔Ⅲ〕 次の英文を読み、下記の設問（A～C）に答えなさい。

The Agricultural Revolution is a major turning point in human history. It reflects a significant transformation in the general organization of human society and its components. Since the appearance of humans as tool-makers, some three million years ago, that is, since the moment we began producing tools and using them as a <sup>(1)</sup>key vehicle in our daily activities, <sup>(7)</sup>no transformation was as significant as the Agricultural Revolution. After three million years of living in small, mobile communities by hunting animals and gathering plant foods, the Agricultural Revolution, which took place during the Neolithic\* period, just over 10,000 years ago, brought about a prominent transformation in human life-ways. Mostly, it allowed humans to become food-producers, making them a unique and singular being on Earth. They began to settle in large and small farming villages, which soon grew in size to very large villages, and later to cities.

Some claim that the development of cities in the Near East\*\* about 5,000-6,000 years ago, compared to the large villages that preceded them, was but a natural outcome of the Agricultural Revolution. <sup>(1)</sup>Others see a major significance in this development. In their view, this was another revolution that bore <sup>(2)</sup>additional consequences for the social and economic framework. <sup>(3)</sup>Among the changes of this revolution was the expansion of settlements, the concentration of large populations in cities, and the birth of new social institutions such as kings and princes, states and taxes, temples and priests, armies and generals. They all represented yet another step toward the formation of the modern world <sup>(4)</sup>as we know it.

The next significant transformation would not occur until thousands of years later. The Industrial Revolution that took place in the Western world some 200 years ago could also be perceived as an important transformation in the history of humankind, which further changed human perceptions as well as social structure and organization. We view the current Digital Revolution in borderless information technology as yet another transformation, driving far-reaching changes in human societies and human behavior.

This short summary of human transformations clearly shows that <sup>(ウ)</sup>important changes in our history are occurring at shorter time intervals and at an ever-increasing pace. With their technological and economical skills combined with curiosity and various capabilities, humans have succeeded in densely populating the Earth and taking over its resources.

\*Neolithic：新石器時代の

\*\*Near East：近東（東地中海周辺の地域）



設 問

A. 本文中の下線部（1～4）を置き換えるものとして最も適当なものを、それぞれ下記（a～d）の中から1つ選び、その記号をマークしなさい。

(1) key vehicle

- |                        |                          |
|------------------------|--------------------------|
| a. vital means         | b. way of transportation |
| c. significant concept | d. locking device        |

(2) additional consequences for

- |                             |                           |
|-----------------------------|---------------------------|
| a. exceptional results from | b. further impacts on     |
| c. rapid advances in        | d. special provisions for |

(3) Among

- |              |                    |
|--------------|--------------------|
| a. Out of    | b. Included in     |
| c. Adding to | d. Halfway through |

(4) as we know it

- |                       |                       |
|-----------------------|-----------------------|
| a. as it sets out     | b. as it passes away  |
| c. as it goes forward | d. as it exists today |

B. 本文中の二重下線部（ア～ウ）が文中で表している内容に最も近いものを、それぞれ下記（a～d）の中から1つ選び、その記号をマークしなさい。

(ア) no transformation was as significant as the Agricultural Revolution

- a. There has been no notable improvement in human lifestyle since the Agricultural Revolution.
- b. The importance of the Agricultural Revolution has not been evaluated properly in the course of human history.
- c. No other change in human history ever compared with the Agricultural Revolution in its significance.
- d. The Agricultural Revolution was no more important than other human efforts to reform their lifestyle.

- (イ) Others see a major significance in this development.
- a. The development of cities about 5,000–6,000 years ago is claimed to have followed different courses outside the Near East.
  - b. The world outside the Near East recognizes the development of cities about 5,000–6,000 years ago as extremely important.
  - c. The reformations after the Agricultural Revolution were characterized by the development of cities, as seen in the case of the Near East about 5,000–6,000 years ago.
  - d. There are also opinions that the development of cities in the Near East about 5,000–6,000 years ago should be recognized as another important reformation in human history.
- (ウ) important changes in our history are occurring at shorter time intervals and at an ever-increasing pace
- a. The frequency and rate of human turning points, such as the Agricultural Revolution, the Industrial Revolution, and the Digital Revolution, are increasing as time progresses.
  - b. Significant reformations in human history, such as the Agricultural Revolution, the Industrial Revolution, and the Digital Revolution, tend to end sooner and become less important over time.
  - c. Changes brought about by later human reformations have more immediate and continuing effects on our societies and economies than those of earlier ones.
  - d. Human revolutions in later ages are likely to become smaller in scale but more influential than earlier ones in shaping the structure of our societies and economies.

C. 次の問い ( i 、 ii ) の答えとして最も適当なものを、それぞれ下記 ( a ～ d ) の中から 1 つ選び、その記号をマークしなさい。

( i ) Which of the following was caused by the Agricultural Revolution?

- a. A shift in the way of human life from hunting animals to gathering plant foods.
- b. The evolution of human brains and the beginning of their tool creation.
- c. The emergence of humans as the sole species on Earth capable of building mobile communities.
- d. The introduction of farming and the enlargement of human villages.

( ii ) Which of the following is NOT true about reformations in human history?

- a. The Agricultural Revolution happened more than 10,000 years before the Neolithic period.
- b. The Agricultural Revolution is one of the most significant events that dramatically changed the human life.
- c. Some people consider the development of cities in the Near East as merely a result of the Agricultural Revolution.
- d. The Digital Revolution of the present day is believed to bring about extensive changes in the way humans live.

〔Ⅳ〕 次の英文（１～１０）の空所に入れるのに最も適当なものを、それぞれ下記（a～d）の中から１つ選び、その記号をマークしなさい。

- (1) Caroline ( ) made it to the class as the train was running late due to an accident.  
a. slightly                      b. barely                      c. rarely                      d. occasionally
- (2) Rice is not native ( ) Japan, though some people believe so.  
a. with                      b. for                      c. around                      d. to
- (3) We could easily see how ( ) fun the kids were having in the playground because they kept running around.  
a. many                      b. much                      c. a lot of                      d. far
- (4) We ( ) as well go grocery shopping as we don't have anything else to do today.  
a. might                      b. could                      c. should                      d. would
- (5) George got a second place in the diving competition, ( ) was better than his coach had expected.  
a. that                      b. by that                      c. which                      d. at which
- (6) Sophia ( ) to teach a new trick to her cat for the past three hours.  
a. is trying                      b. has been trying                      c. tries                      d. is being tried
- (7) It is important to maintain ( ) between your personal life and professional life.  
a. boundaries                      b. paces                      c. shapes                      d. graces
- (8) Additional chairs as well as a large table ( ) into the office in preparation for a conference.  
a. was bringing                      b. were bringing                      c. was brought                      d. were brought
- (9) A team of researchers started a project to ( ) a remote island in the Pacific Ocean.  
a. envy                      b. edit                      c. explore                      d. endure
- (10) It was sensible ( ) you not to make a rash decision regarding a financial issue.  
a. of                      b. about                      c. in                      d. by

〔V〕 次の日本文（1～5）に相当する意味になるように、それぞれ下記（a～h）の語句を並べ替えて正しい英文を完成させたとき、並べ替えた語句の最初から2番目と6番目に来るものの記号をマークしなさい。ただし、文頭に来る語も小文字で始めています。

（1） あなたのおじさんは、どのレストランが町で一番よいと勧めていましたか？

（                      ） best in town?

- |          |               |              |         |
|----------|---------------|--------------|---------|
| a. did   | b. restaurant | c. which     | d. your |
| e. uncle | f. as         | g. recommend | h. the  |

（2） 子供向けに作られたテレビ番組の重要性は十分に評価されていない。

The importance of TV programs (                      ) appreciated.

- |          |         |         |         |
|----------|---------|---------|---------|
| a. fully | b. for  | c. is   | d. that |
| e. not   | f. kids | g. made | h. are  |

（3） 上司があなたに激怒していると知っていたら、彼らはあなたに警告していただろうに。

They would have warned (                      ) you.

- |          |        |            |              |
|----------|--------|------------|--------------|
| a. at    | b. was | c. furious | d. your boss |
| e. known | f. you | g. they    | h. had       |

（4） 駆け出しの美術教師だった私は、生徒に好きなように描かせることに慣れていなかった。

As a beginning art teacher, I was not used (                      ).

- |            |             |          |       |
|------------|-------------|----------|-------|
| a. letting | b. students | c. my    | d. as |
| e. paint   | f. they     | g. liked | h. to |

（5） 客が店から出られなかったのは、大雨のせいだった。

(                      ) the heavy rain.

- |                  |            |         |         |
|------------------|------------|---------|---------|
| a. the customers | b. had     | c. from | d. what |
| e. the store     | f. leaving | g. was  | h. kept |

〔Ⅵ〕 次の会話文を読み、空所（1～10）に入れるのに最も適当なものを、それぞれ下記（a～d）の中から1つ選び、その記号をマークしなさい。

*Father:* Do you ( 1 ) to know where the toolbox is?

*Daughter:* Sorry, no idea.

*Father:* Honestly, every time I want to use a screwdriver, I waste hours looking for it.  
No one in this house ever ( 2 ) to put things back after using them!

*Daughter:* Dad, why do you ( 3 ) to me? I really don't know. Ask Mom.

*Father:* Well, I've already asked her. She said she didn't know, either. And then I remembered that you were using a saw and a hammer.

*Daughter:* Me? When?

*Father:* Oh, I don't know. When you were making something for your school assignment.

*Daughter:* ( 4 ), Dad! It was more than half a year ago.

*Father:* ( 5 )?

*Daughter:* Yes. And I saw you using the toolbox when you were repairing your bike.  
Wasn't it about a couple of months ago?

*Father:* Eh, maybe. Well then, who used it after that?

*Daughter:* I don't know. Why don't you ask Mike?

*Father:* Seriously? No way. Why ( 6 ) would a four-year-old boy know where the toolbox is?

*Daughter:* It's ( 7 ). You know, he always loves real things.

*Father:* What do you mean?

*Daughter:* Oh, do you remember what happened when you bought him a toy phone last year?

*Father:* Of course! He took away my smartphone and called everyone in my address book. That was a ( 8 ).

*Daughter:* And when you gave him a toy kitchen knife?

*Father:* Yeah, that was ( 9 ). He nearly cut off his fingers with a real one in the kitchen.

*Daughter:* And of course you know why you had to repair your bike after giving him a toy bike.

*Father:* Uh-huh.

*Daughter:* And ( 10 )? You gave him a toy toolbox last week as a Christmas present.

*Father:* Oh my goodness!! You're right! Where is he?

- (1) a. ought                      b. think                      c. happen                      d. have
- (2) a. bothers                      b. becomes                      c. gets used                      d. pays attention
- (3) a. claim                      b. scold                      c. focus                      d. complain
- (4) a. Come on                      b. I was joking                      c. I didn't do it                      d. Don't tell a lie
- (5) a. Actually                      b. Was it                      c. So old                      d. Do you mean
- (6) a. by himself                      b. on earth                      c. do you say                      d. can it be
- (7) a. absurd                      b. impossible                      c. not unlikely                      d. far from realistic
- (8) a. disaster                      b. time                      c. relief                      d. bad luck
- (9) a. contrary                      b. close                      c. fun                      d. expensive
- (10) a. promise                      b. remember                      c. predict                      d. remind