

- 〔 I 〕 次の文を読んで設問に答えなさい。〔*印のついた語句は注を参照しなさい。〕
(79点)

Climate change is already bringing unavoidable large-scale changes to our environment, societies, and economies. Over the past 30 years, droughts and floods in Europe have increased dramatically both in number and intensity. Worldwide, the harmful effects of these changes are becoming more evident by the year: higher temperatures increase the risk of species extinction and the spread of infectious diseases, melting glaciers affect water supply and increase flood risks, and forced migration from areas most affected heightens the possibility of conflict and insecurity.

Climate change threatens to make extreme weather events more frequent and more severe. This will have major implications for sectors such as agriculture, energy, transportation, health, and tourism. It will significantly affect entire economies and societies through its impact on the physical and biological components of ecosystems*: water, soil, air, and biodiversity*.

We must therefore learn to anticipate the damage climate change can cause and take appropriate actions to prevent or minimize its adverse effects. This is a process known as adaptation. Early action will lessen the cost of future damage. Examples of adaptations include developing crops that can tolerate drought, finding ways to use water more efficiently in areas where it is becoming scarce, and strengthening coastal flood defenses.

The responsibility for making these adaptations cannot rest solely with individuals or businesses. Because effects will vary region by region, most strategies will need to be taken nationally, regionally, or locally. So far, only a few member states of the European Union (EU) have developed strategies for dealing with the effects of climate change. To ensure a comprehensive and strategic approach, the European Commission

has drawn up a White Paper* outlining actions to strengthen Europe's ability to meet the challenges of a changing climate.

The White Paper proposes a two-stage strategy for adapting to the effects of climate change in the EU. It aims to set an EU framework for action and to provide the tools for assessing needs and measures and for making decisions at the right level. The role of the EU will be to support the efforts of its member states through an integrated and coordinated approach at the EU level. The intention is not to replace action already being undertaken but to complement it.

The first phase will run until 2012 and lay the foundation for a more comprehensive EU strategy for 2013 and beyond. Phase One focuses on four key areas, the first of which centers on the need to build a solid knowledge base. Information from across the whole of the EU is necessary to ensure that effective decisions are made. Although a considerable amount of information already exists, data on the effects of climate change remain weak overall and vary considerably across regions. The White Paper therefore proposes creating a European Clearing House which would serve as a database on the effects of climate change, vulnerability, and best practices for adaptation to improve the sharing of information across Europe. The Clearing House Mechanism should be operational by 2011.

Secondly, because climate change will have a massive impact on so many different sectors it will be crucial that adaptations are incorporated into all key policy areas. Changing weather patterns will affect agriculture and fisheries, as well as infrastructure planning and policies on transportation, energy, forestry, biodiversity, water, and health. Working adaptation into all of these policy areas will help reduce the long-term vulnerability of these sectors.

Adaptation will also require substantial funds. The third key area identifies a range of public and private means of financing. This includes

making better use of currently available funds as well as exploring the potential of new mechanisms such as innovative insurance plans and market-based instruments.^(h)

Finally, the EU will step up its efforts to incorporate adaptation into all its external policies to assist those countries most affected by climate change and to cooperate on international adaptation issues with partner countries.

While adaptation is an essential part of addressing the challenges associated with climate change, diminishing greenhouse gas emissions—a process known as climate change mitigation—is equally crucial. The EU's objective is to limit global temperatures to 2 °C above pre-industrial times⁽ⁱ⁾—the threshold beyond which we risk irreversible climate change. This means we will have to stabilize global emissions within the next decade and cut them to around half of 1990 levels by the middle of this century.

The EU is already committed to taking swift action to curb greenhouse gas emissions through the climate and energy package which^(j) was adopted in December 2008 and will transform Europe into a low-carbon society. But mitigation alone is not enough, since the consequences of climate change will probably be more substantial than we now suppose and will occur regardless of the measures that are implemented.

Good cooperation between EU, national, regional, and local authorities will be essential to the success of the first phase of the proposed action on adaptation. To support the coordination of efforts and carry the framework forward, the Commission will set up an advisory forum. This forum will be composed of representatives from EU member states involved in the drawing up of national and regional adaptation programs and will consult with representatives from civil society and the scientific and business communities. It will also be supported by technical working groups.

- [注] ecosystems 生態系
 biodiversity 生物多様性
 a White Paper 白書

I－A 下線部 (a)～(j) の意味・内容にもっとも近いものを次の 1～4 の中からそれぞれ一つ選び、その番号を解答欄に記入しなさい。

(a) droughts

- | | |
|-------------------|---------------|
| 1 currents of air | 2 dry weather |
| 3 earthquakes | 4 warming |

(b) lessen

- | | | | |
|----------|----------|----------|---------|
| 1 accept | 2 double | 3 reduce | 4 teach |
|----------|----------|----------|---------|

(c) drawn up

- | | | | |
|------------|------------|-------------|--------------|
| 1 pictured | 2 prepared | 3 pulled up | 4 tossed out |
|------------|------------|-------------|--------------|

(d) assessing

- | | | | |
|-------------|------------|--------------|----------|
| 1 answering | 2 creating | 3 estimating | 4 saving |
|-------------|------------|--------------|----------|

(e) complement

- | | | | |
|----------|-------------|-------------|-----------|
| 1 add to | 2 emphasize | 3 keep with | 4 restart |
|----------|-------------|-------------|-----------|

(f) phase

- | | | | |
|--------|--------|---------|---------|
| 1 face | 2 form | 3 group | 4 stage |
|--------|--------|---------|---------|

(g) vulnerability

- | | | | |
|----------|--------|------------------|------------|
| 1 danger | 2 harm | 3 responsibility | 4 weakness |
|----------|--------|------------------|------------|

(h) innovative

- | | | | |
|-------------|--------------|-----------|--------------|
| 1 expensive | 2 pioneering | 3 primary | 4 reasonable |
|-------------|--------------|-----------|--------------|

(i) mitigation

- | | | | |
|------------|-------------|-------------|--------------|
| 1 movement | 2 objection | 3 reduction | 4 resistance |
|------------|-------------|-------------|--------------|

(j) curb

- | | | | |
|---------|------------|------------|--------|
| 1 blend | 2 increase | 3 restrain | 4 stop |
|---------|------------|------------|--------|

I－B 二重下線部 (W)～(Z) の意味・内容にもっとも近いものを次の 1～4 の中からそれぞれ一つ選び、その番号を解答欄に記入しなさい。

(W) by the year

- 1 all year round
- 2 each year
- 3 in this particular year
- 4 nowadays

(X) have major implications for

- 1 allow great profits for
- 2 cause insignificant damage to
- 3 have little effect upon
- 4 have significant consequences for

(Y) rest solely with

- 1 be borne to the end by
- 2 be discharged firmly by
- 3 be realized clearly by
- 4 be undertaken exclusively by

(Z) meet the challenges of

- 1 conduct an experiment on
- 2 handle the difficult problems of
- 3 look into the causes of
- 4 watch the development of

I－C 波線部 (ア) を主部と述部に分けるのにもっとも適した箇所を次の(1)～(4)の中から一箇所選び、その番号を解答欄に記入しなさい。

forced migration (1) from areas (2) most (3) affected (4) heightens the possibility of conflict and insecurity

I-D 波線部 (イ) の文にコンマを一つ入れるのにもっとも適した箇所を次の(1)～(4)の中から一箇所選び、その番号を解答欄に記入しなさい。

Secondly, because climate change will have a massive impact (1) on so many different sectors (2) it will be crucial (3) that adaptations (4) are incorporated into all key policy areas.

I-E 本文の意味・内容を的確に表すタイトルとしてもっともふさわしいものを、次の1～4の中から一つ選び、その番号を解答欄に記入しなさい。

- 1 Conflict Between EU Member States
- 2 Coping with a Changing Climate
- 3 Reducing Emissions Is Still Crucial
- 4 The Functions of an Advisory Forum in Addressing Climate Change

I-F 本文の意味・内容に合致するものを次の1～10の中から四つ選び、その番号を解答欄に記入しなさい。

- 1 Climate change has nothing to do with ecology in the strict sense of the term.
- 2 To consider problems in the water supply and to take account of flood risks are examples of adaptations.
- 3 Most of the EU member states already have their own policies regarding climate change.
- 4 The EU will soon focus on the following areas: building a knowledge base about climate change, working adaptations into major policy areas, ensuring money for adaptations, and applying adaptations through diplomatic policies.
- 5 There is already enough information about the effects of climate change in the database, so the EU has decided to launch a European Clearing House Mechanism.

- 6 We have to take into consideration the changing climate when we build the basic systems and services of a society.
- 7 We need a certain amount of money to make proper adaptations, but the cost is not so high.
- 8 If global temperatures rise more than 2℃ compared to the time before the Industrial Revolution, it may be fatal to the environment and its inhabitants.
- 9 Mitigation is not enough to prevent climate change, as none of the measures has been enacted yet.
- 10 Each EU member state will found its own forum and cooperate in making adaptations.

I - G 本文中の太い下線部を日本語に訳しなさい。

We must therefore learn to anticipate the damage climate change can cause and take appropriate actions to prevent or minimize its adverse effects.

〔Ⅱ〕 次の文を読んで設問に答えなさい。〔各段落の冒頭にある数字は段落番号です。〕(71点)

① One of the strangest side-effects of intense fear is the apparent^(a) slowing down of time. It's a common metaphor in movies and TV shows, like the memorable scene from the movie *The Matrix* in which time slows down so dramatically that bullets fired at the hero seem to move at a walking pace. In real life, our perceptions are neither heightened nor distorted quite so dramatically, but survivors of life-and-death situations^(b) often report that things seem to take longer to happen, objects fall more slowly, and they're capable of complex thoughts in (X) would normally be the blink of an eye.

② Now a research team from Israel reports that not only does time slow down, but it slows down more for some than for others. Anxious people, they found, experience greater expansion of time in response to the same threats.^(c)

③ An interesting result, and one^(d) that raises a more fundamental question: how, exactly, does the brain carry out this remarkable feat^(e)?

④ Researcher David Eagleman has tackled^(f) this very issue in a very clever way. He reasoned^(g) that when time seems to slow down in real life, either our senses and perception must somehow speed up, or time expansion is merely an illusion. This is the riddle he set out to solve^(h). “Does the experience of slow motion really happen,” Eagleman asks, “or does it only seem to have happened when you recall an event after the fact?”⁽ⁱ⁾

⑤ To find out, he first needed a way to generate^(j) fear of sufficient intensity in participants in the experiment. Instead of skydiving, he found a thrill ride near the university campus: an open-air tower from which participants are dropped, upside down, into a net 45 meters below. There

are no harnesses, no safety lines. Participants drop in free-fall for three seconds, then hit the net at 112 kilometers per hour.

⑥ Was it scary enough to generate a sense of time expansion? To see, Eagleman asked participants who'd already taken the plunge to estimate how long it took them to fall, using a stopwatch to tick off what they felt to be an equivalent amount of time. Then he asked them to watch someone else fall and then estimate the elapsed time for his or her plunge in the same way. On average, participants felt that their own experience had taken 36 percent longer. Time expansion was in effect.

⑦ Next, Eagleman outfitted his test participants with a special device that he and his students had constructed. It's a simple number display that is strapped to a user's wrist, with a knob on the side which lets the researchers adjust the rate (Y) the numbers flash. The idea was to dial up the speed of the flashing until it was just a bit too quick for the participant to read while looking at it in a non-stressed mental state. Eagleman reasoned that, if fear really does speed up our rate of perception, then once the participants were in the terror of free-fall, they should be able to make out the numbers on the display.

⑧ As it turned out, they couldn't. That means that fear does not actually speed up our rate of perception or mental processing. Instead, it allows us to remember what we do experience in greater detail. Since our perception of time is based on the number of things we remember, fearful experiences thus seem to unfold more slowly.

⑨ Eagleman's findings are important not just for understanding the experience of fear, but for the very nature of consciousness. After all, the test participants who fell from the tower certainly believed, as they accelerated through free-fall, that they knew what the experience was like at that very moment. They thought that it seemed to be moving slowly. Yet Eagleman's findings suggest that that sensation could only have been

imagined after the fact. The implication is that we don't really have a direct experience of what we're feeling "right now," but only a memory — an unreliable memory — of what we thought it felt like some seconds or fractions of seconds ago. The vivid present tense we all think we inhabit⁽¹⁾ might itself be an illusion.

Ⅱ－A 下線部 (a)～(1) の意味・内容にもっとも近いものを次の 1～4 の中からそれぞれ一つ選び、その番号を解答欄に記入しなさい。

(a) apparent

1 artificial

2 gradual

3 seeming

4 well-known

(b) distorted

1 brought low

2 distinguished by their clarity

3 out of touch with reality

4 subject to distraction

(c) carry out this remarkable feat

1 abuse this precious function

2 accomplish this astonishing act

3 create this extraordinary emotion

4 transmit this powerful impulse

(d) tackled

1 dealt with

2 discussed

3 illustrated

4 put an end to

(e) reasoned

1 demanded

2 explained

3 persuaded

4 reckoned

(f) set out to solve

- 1 embarked on the task of solving
- 2 finally succeeded in solving
- 3 spent all his energies to solve
- 4 was determined to solve

(g) after the fact

- | | |
|----------------------|----------------------------|
| 1 after it is over | 2 after you know the truth |
| 3 as if it were real | 4 in minute detail |

(h) generate

- | | |
|---------------|----------------|
| 1 get used to | 2 give rise to |
| 3 overcome | 4 share |

(i) make out

- | | |
|-------------|-------------|
| 1 calculate | 2 guess |
| 3 memorize | 4 recognize |

(j) As it turned out

- | | |
|-------------------------|------------------------------|
| 1 In fact | 2 Though it may seem strange |
| 3 To his disappointment | 4 Without doubt |

(k) unfold

- | | |
|-----------------|-----------------|
| 1 be discovered | 2 develop |
| 3 disappear | 4 repeat itself |

(l) inhabit

- | | |
|-----------|--------------|
| 1 control | 2 live in |
| 3 look at | 4 understand |

Ⅱ－B 段落①の空所(X)と段落⑦の空所(Y)に入るもっとも適切なものを次の1～4の中からそれぞれ一つ選び、その番号を解答欄に記入しなさい。

- | | | | | |
|-----|---|----------|---|-----------|
| (X) | 1 | it | 2 | that |
| | 3 | what | 4 | which |
| (Y) | 1 | at which | 2 | by whom |
| | 3 | of which | 4 | with whom |

Ⅱ－C 段落②の波線部(ア)と段落⑥の波線部(イ)の意味・内容をもっとも的確に示すものを次の1～4の中からそれぞれ一つ選び、その番号を解答欄に記入しなさい。

- (ア) it slows down more for some than for others
- 1 certain kinds of threats are more likely to cause time expansion than other kinds of threats
 - 2 some researchers believe time slows down because of fear, while other researchers deny that
 - 3 time expansion occurs in some experiments but it does not in others
 - 4 to some people, when they are put in a stressful situation, time seems to slow down greatly, but to others time does not seem to slow down as much
- (イ) the elapsed time
- 1 the amount of time which one wasted
 - 2 the duration of the impact of an event
 - 3 the time extended in one's mind
 - 4 the time that has passed

II－D 段落③の二重下線部 (あ) と段落⑧の二重下線部 (い) が指すものを次の 1～4 の中からそれぞれ一つ選び、その番号を解答欄に記入しなさい。

(あ) one

- | | |
|-------------------|--------------|
| 1 a person | 2 a question |
| 3 a research team | 4 a result |

(い) it

- | | |
|------------------|--------------------------|
| 1 fear | 2 our rate of perception |
| 3 the experiment | 4 time |

II－E 段落⑤と⑥の意味・内容に合致するものを次の 1～6の中から二つ選び、その番号を解答欄に記入しなさい。

- 1 The fall from the tower was not scary enough for the participants to experience time expansion.
- 2 When the participants of the experiment measured the time of their fall with a stopwatch, they found that it was shorter than they had thought.
- 3 The participants of the experiment were asked to recall how long they felt it took for them to fall, and to estimate the amount of time by ticking off the stopwatch.
- 4 The participants of the experiment measured the time of the plunge of someone else, and they found that it was actually longer than their own fall had been.
- 5 In this experiment, Eagleman proved the effect of time expansion by comparing the amount of time for two free-falls estimated by the participants, that is, their own fall and someone else's.
- 6 In this experiment, the presence of time expansion was not proved because it depended only on the perception of participants.

Ⅱ－F 段落⑦～⑨の意味・内容に合致するものを次の1～6の中から二つ選び、その番号を解答欄に記入しなさい。

- 1 The stress and terror which the participants of the experiment felt while they fell from the tower were so strong that they could not read the numbers on the display.
- 2 Eagleman's experiment proved that we cannot read numbers on the display under normal conditions if they flash too quickly.
- 3 When we are exposed to the fear of a free-fall, we perceive many things — things, for example, which we do not notice in a non-stressed mental state.
- 4 Time seems to slow down during fearful experiences, because, when we feel intense fear, we remember many things we experience during those fearful events.
- 5 The result of Eagleman's experiment suggests that we cannot be conscious of what an experience feels like as it occurs, and that we remember only what we felt just a second or a tiny fraction of a second ago.
- 6 The author concludes that, since our memory is unreliable, we should try to get hold of the sensation of the present moment as "real."

〔Ⅲ〕 次の対話を読んで設問に答えなさい。(50点)

(John and Eva, a middle-aged American couple on holiday, sit in a cafe beside the Sanjo Bridge in central Kyoto. Some travel guidebooks lie between them, and a camera.)

Eva: (*Irritated.*) Finally we're here in Kyoto, 6,000 miles from home. But we're only sitting at a cafe, doing nothing.

John: (*Smiling.*) Yes. We're sitting in Kyoto, at a cafe. No doubt about that.

Eva: Are you still exhausted from the flight, John? _____ (a)

John: Never was exhausted to begin with. And if *I'm* not with you, who is?

Eva: And yet here we are, sitting in a cafe, doing nothing.

John: I think _____ (b)

Eva: John, this is the city of a thousand temples! Why don't we get up and go to see those temples? Kinkakuji, Ginkakuji, Kiyomizudera —

John: I know the list. There's a bus that'll take you to all of them. It's in the guidebooks. Make the rounds in a day. Snap all the photos you want. Snap photos of other tourists snapping photos of temples. Then, have *them* snap photos of you standing in front of the same temples. After that, buy photos of the temples at the shops. You will indeed have been in Kyoto. The photos will prove it.

Eva: (*Smiling.*) _____ (c)

John: Not to the temples.

Eva: Exactly. But they're the things we came here to see. This city is so rich in history. _____ (d) — 1,200 years old or something?

John: Thereabouts.

Eva: So let's go. Back in time. Imagine what Kyoto was like 500 years ago, or more!

John: Sweetheart, I once heard it said that _____ (e) I also heard it said that life is an affair of people, not of places or things. Look around us. Right here. Thousands of people, going about their business, getting into mischief, enjoying the hour we live in now. Wouldn't you rather get in among them all, strike up a few conversations, see what comes of them? Look at all the people in the restaurants and cafes. _____ (f) Only not in the ways we're used to — 6,000 miles away, back home. That's what makes it so interesting and exciting.

Eva: I see. But I think I *am* going out to visit the temples anyway. (*She rises.*) You really don't want to come with me, do you?

John: _____ (g) But when we meet up later, at yet another cafe, by night, you're going to tell me all about it. [僕は自分で経験するよりむしろ、君のお寺の経験について君がしゃべるのを聞く方がいいんだよ。] That's how much you charm me. Because, after all —

Eva: "Life is an affair of people." See you later.

John: I'll be waiting. You'll know where to find me.

Eva: (*Smiling.*) In a cafe, talking. But waiting most to hear my talk.

John: _____ (h)

Ⅲ－A 空所 (a)～(h) に入るもっとも適切なものを次の 1～4 の中からそれぞれ一つ選び、その番号を解答欄に記入しなさい。

- (a) 1 I'm all right.
2 I mean, are you really with me?
3 I want to tell you something.
4 We're alone together at last.
- (b) 1 I'm missing your point.
2 we should get up and go.
3 you're taking me wrong.
4 you should know what I mean.
- (c) 1 Do that many people really go to the temples?
2 I know where this conversation is headed.
3 Let me bring my camera so that I can take photos.
4 Yes, the photos will be true to the real thing.
- (d) 1 What is it
2 When was it
3 Where were we
4 Who told you
- (e) 1 Kyoto was not the center of power in Japan.
2 old historic cities attract lots of tourists nowadays.
3 people ought to be proud of their cultural heritage.
4 the world belongs to the living.
- (f) 1 Calm and peace fill the whole city.
2 It's all so present and alive.
3 It's so old and boring.
4 The city is rapidly modernizing itself.

- (g) 1 Certainly I will.
2 I don't know.
3 Not, I should think.
4 You're so kind.
- (h) 1 Maybe, maybe not.
2 Please don't spend too much money.
3 Precisely.
4 Whatever you say.

Ⅲ－B 本文中の [] 内の日本語を英語で表現しなさい。

僕は自分で経験するよりむしろ、君のお寺の経験について君がしゃべるのを聞く方がいいんだよ。