デザイン工学部Ａ方式Ⅰ日程・理工学部Ａ方式Ⅰ日程 生命科学部Ａ方式Ⅰ日程

1 限 英 語 （90分）

〈注意事項〉

1. 試験開始の合図があるまで，問題冊子を開かないこと。

2. 解答はすべて解答用紙に記入しなさい。

3. マークシート解答方法については以下の注意事項を読みなさい。

マークシート解答方法についての注意

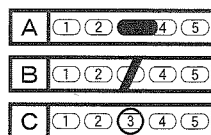　マークシート解答では，鉛筆でマークしたものを機械が直接読みとって採点する。したがって解答はHB の黒鉛筆でマークすること（万年筆，ボールペン，シャープペンシルなどを使用しないこと）。

記入上の注意

1. 記入例　　　　解答を 3 にマークする場合。

(1) 正しいマークの例

A ① ② ● ④ ⑤

(2) 悪いマークの例

A ① ② ● ④ ⑤

B ① ② ／ ④ ⑤

C ① ② ③ ④ ⑤

枠外にはみださないこと。

〇でかこまないこと。

2. 解答を訂正する場合は，消しゴムでよく消してから，あらためてマークすること。
3. 解答用紙をよごしたり，折りまげたりしないこと。
4. 問題に指定された数よりも多くマークしないこと。

〔Ⅰ〕 つぎの英文を読んで [＿＿＿] の中に入る最も適切な語(句)をイ～ニの中から
一つ選び，その記号を解答用紙にマークせよ。

My High School Days

(1) we were high school students, my friends and I (2) often
go to coffee shops around Odawara station.　There were many coffee shops,
and we chose different places on different days.　One of my favorites was
named Sajiki.　It provided us (3) nice drinks, relaxing music, and a
good time.　I remember once (4) half a day talking with a friend of
mine there.　We talked about club activities, music, studies, and parties.
All the coffee shops we (5) out at after school have disappeared.　The
memories, (6) , will never, ever disappear.

(1)　イ　That　　　ロ　When　　　ハ　Where　　　ニ　Which

(2)　イ　might　　　ロ　very　　　ハ　most　　　ニ　used to

(3)　イ　to　　　ロ　for　　　ハ　with　　　ニ　from

(4)　イ　stood　　　ロ　spent　　　ハ　standing　　　ニ　spending

(5)　イ　hung　　　ロ　took　　　ハ　gave　　　ニ　carried

(6)　イ　otherwise　　　ロ　therefore　　　ハ　however　　　ニ　then

〔Ⅱ〕 つぎの英文中の空欄に入る最も適切な語(句)をイ〜ニの中から一つ選び，その記号を解答用紙にマークせよ。

(1) It is a bit cold, so don't leave the door ☐ .

   イ　to open　　　　　　　　　　ロ　opened

   ハ　open　　　　　　　　　　　　ニ　with opening

(2) The waiter ☐ us the menu.

   イ　brought　　ロ　had　　ハ　took　　ニ　kept

(3) The cold weather ☐ the leaves yellow.

   イ　took　　ロ　brought　　ハ　gave　　ニ　turned

(4) What ☐ movie it is!

   イ　an amazed　　　　　　　　ロ　an amazing

   ハ　an amazement　　　　　　ニ　an amazingly

(5) The boy enjoyed ☐ like a man.

   イ　having treated　　　　　　ロ　treating

   ハ　to treat　　　　　　　　　　ニ　being treated

(6) This book is ☐ great interest.

   イ　of　　ロ　in　　ハ　from　　ニ　at

(7) Hurry up, ☐ you will be late for your train.

   イ　or　　ロ　but　　ハ　instead　　ニ　nonetheless

(8) London is no longer the city ☐ it was twenty years ago.

   イ　where　　ロ　which　　ハ　in which　　ニ　when

— 3 —

(9) Mt. Fuji is worth ☐ once.

　イ　for climb　　ロ　to climb　　ハ　for climbing　ニ　climbing

(10) ☐ a fluent speaker of English, Yui is often mistaken for a native English speaker.

　イ　Been　　ロ　Being　　ハ　To be　　ニ　Having

(11) The students returned home very ☐ after the test.

　イ　to be depressed　　　　　ロ　depressing

　ハ　depressed　　　　　　　ニ　depression

(12) ☐ , the birds flew lower in the sky.

　イ　With the rain falls　　　　ロ　As the rain beginning to fall

　ハ　With the rain beginning to fall　ニ　As the rain falling

(13) Ryo was rich ☐ to buy a yacht.

　イ　sufficient　　ロ　well　　ハ　enough　　ニ　so

(14) That is the key ☐ understanding global issues.

　イ　of　　ロ　to　　ハ　at　　ニ　from

(15) The article appeared in *Science*, ☐ .

　イ　in which a distinguished scientific journal

　ロ　that is a distinguished scientific journal

　ハ　it is a distinguished scientific journal

　ニ　a distinguished scientific journal

— 4 —

〔Ⅲ〕 2004年のインド洋大津波に関するつぎの英文を読み，設問に答えよ。

It was early in the morning on 26 December 2004, on the Thai island of Koh Lanta, and Ampai's husband was out fishing. She sat on a woven mat on the porch with her three sons. Behind them, life jackets and fishing nets were hung to dry. Their home was a wooden hut built on poles over the sea to allow easy access for the family's fishing boat. They earned around 1,000 baht (US$30) for a good day's catch of fish. Their poor fishing village was totally reliant on the ocean.
(1)

"I was on the hillside above the house when the sea rushed out and I saw the wave coming," she remembers. "I had seen a Japanese documentary about tsunamis on TV, so I knew straight away what was happening. Some of my neighbors just stood there staring at the wave, but I shouted at them to run up the hill."

Ampai counted seven waves in total. "The first two passed by offshore, then the third one hit our house," she recalls. "The water came back down carrying rocks, and, by the end, our home was completely destroyed. There were around 100 houses in our village, and almost half of them were destroyed, along with many fishing boats."

Everyone in Ampai's village survived, thanks in part to her warning.
(2)
"I was very afraid and desperately worried about my children," she continues. "I told my neighbors not to worry about their homes or possessions — we just had to save our lives."
(3)

The tsunami that day, triggered by a 9.1 magnitude earthquake off the Indonesian island of Sumatra, was one of the deadliest in history. It led to the displacement of 1.6 million people, caused material damage estimated at
(4)
close to $14 billion, and claimed nearly 230,000 lives.

This heavy toll is largely due to the fact that people were caught by
(5)
surprise and had no time to run for safety before the wave broke. The

countries of the Indian Ocean had not established a warning system as they had had little experience of tsunami occurrences, 70% of which take place in the Pacific Ocean and its <u>adjacent</u> seas.
(6)

Following this tragedy, Indian Ocean countries turned to UNESCO to establish and coordinate a warning system, similar to the one that has operated in the Pacific Ocean since 1965. Two other warning systems were established at the same time as the Indian Ocean System — in the Northeast Atlantic and Mediterranean, as well as in the Caribbean — ensuring that all marine areas in the world are covered.

Officially established in 2005, the Indian Ocean Tsunami Warning System became fully operational in 2011. Twenty-eight countries belong to its intergovernmental coordination group. Three experiments conducted in 2009, 2011, and 2014 proved that the system functioned. Moreover, post-tsunami investigations have <u>yielded</u> a mass of data that improves our
(7)
understanding of this natural phenomenon. Scientists are now able to model tsunami occurrences and see how they travel from the ocean to the shores.

In the Indian Ocean, a network of seismometers* and tide gauges with satellite links provides data concerning underwater earthquakes to three regional tsunami advisory centers in Australia, India, and Indonesia. These centers are then able to <u>alert</u> the relevant national authorities in the
(8)
event of a tsunami. Nevertheless, there remain several challenges that must still be overcome.

Meeting these challenges is a major issue. Although the warning system functions at the regional and national levels, it is necessary to make sure that populations living in remote areas will be reached in time to escape the wave. Funding represents another hurdle. Keeping the warning system operating costs between 50 and 80 million dollars annually.

Back on the Thai island, Ampai's family stayed at the local school for a

month after the tsunami. Then they moved to Ampai's mother's house further uphill while they rebuilt their own home. "It was a difficult time," Ampai says. "We didn't have enough rice to eat, and the shops raised their prices." As a health volunteer with the nearby hospital and leader of the local women's group, Ampai distributed food and supplies in her village, making sure that everybody got a fair share.

She also set up a business with other women drying and selling fish, with 30,000 baht in funding from UNICEF. Within a few years, Ampai had increased the funds to 300,000 baht. "We used the funding to buy equipment like knives, wooden buckets, and ice coolers," she says. "We also used some of the profits to support elderly and vulnerable villagers."

A few months after the tsunami, the local school reopened. UNICEF stocked the library with schoolbooks and provided a motorcycle for the teachers so they could make home visits to remote families, particularly if their children didn't show up for class. Ten years later, both the schoolbooks and motorcycle are still in use.

語注*

* seismometers：地震計

問1 下線部(1)〜(9)の語について，意味が最も近いものをそれぞれイ〜ニから一
つ選び，その記号を解答用紙にマークせよ。

(1) reliant

イ dependent 　　ロ present 　　ハ located 　　ニ lost

(2) thanks

イ grateful 　　　　　　　　ロ owing

ハ contrary 　　　　　　　　ニ with respect

(3) possessions

イ residents 　　　　　　　ロ addresses

ハ impressions 　　　　　　ニ belongings

(4) displacement

イ release 　　ロ monitoring 　　ハ relocation 　　ニ rescue

(5) toll

イ fare 　　ロ loss 　　ハ lack 　　ニ accident

(6) adjacent

イ ancient 　　　　　　　　ロ absent

ハ separate 　　　　　　　ニ connected

(7) yielded

イ allowed 　　ロ shielded 　　ハ produced 　　ニ helped

(8) alert

イ engage 　　ロ advertise 　　ハ warn 　　ニ awake

(9) stocked

イ recorded 　　　　　　　ロ supplied

ハ rebuilt 　　　　　　　　ニ submitted

問2　以下の(1)～(8)の問いの答えとして最も適切なものをそれぞれイ～ニの中から一つ選び，その記号を解答用紙にマークせよ。

(1) Why could Ampai identify the waves as a tsunami?

　イ　because she used to live in Japan

　ロ　because her hut on the sea was vulnerable to tsunami

　ハ　because she counted the number of waves that passed offshore

　ニ　because she had learned about tsunami from a TV documentary

(2) How many people died in Ampai's village due to the tsunami?

　イ　0　　　　　　ロ　14　　　　　　ハ　100　　　　　　ニ　230,000

(3) Where was the first tsunami warning system established?

　イ　in the Indian Ocean

　ロ　in the North Atlantic and Mediterranean

　ハ　in the Caribbean

　ニ　in the Pacific Ocean

(4) How long did it take for the Indian Ocean tsunami warning system to become fully operational?

　イ　about 3 years　　　　　　ロ　about 6 years

　ハ　about 10 years　　　　　　ニ　about a month

(5) What needs to be done to improve the Indian Ocean tsunami warning system?

　イ　reach remote areas and secure funds

　ロ　conduct investigations to obtain data

　ハ　build networks of meters and gauges

　ニ　invite more countries into its coordination group

(6) What happened to the business set up by Ampai and the other women?

イ All its profits were distributed among vulnerable villagers.

ロ It lost its funding from UNICEF.

ハ It became so successful that it increased its funds by 10 times.

ニ It helped reopen the local school with a gift of schoolbooks.

(7) What does the article suggest about Ampai and the other villagers?

イ They don't fish anymore.

ロ They have recovered.

ハ They are still depressed.

ニ They live on another island.

(8) What is the best title for this article?

イ How the tsunami warning system works

ロ Assessing the economic impact of tsunami warning systems

ハ Rebuilding after the tsunami

ニ The relationship between tsunami and earthquakes

問3 下線部(X)が示唆することとして最も適切なものをイ〜ニの中から一つ選び，その記号を解答用紙にマークせよ。

イ The villagers are still poor.

ロ Post-tsunami aid still benefits the island's children.

ハ Schoolbooks and motorcycles are durable goods.

ニ The Thai government should provide more money.

〔Ⅳ〕 つぎの英文は外来植物(invasive species)についての一つの考えを述べたものである。それを読んで，設問に答えよ。なお，英文中の［1］～［8］はパラグラフ番号を示す。

[1] To judge by some news, you might think that invasive species of plants threaten to wipe out native species. But do plant species from other lands actually cause environmental damage by outcompeting local species?
(1)

[2] Despite concerns, alien plants are rarely troublesome to native ones according to a new study in Britain. In many cases, where aliens thrive, locals thrive too. Where they don't, neither do the locals. No one, (あ)
(い)
it seems, is being driven towards extinction*¹ by introductions.
(う)

[3] Two researchers from The University of York in England, Dr. Chris Thomas and Dr. Georgina Palmer, used data from a study of Britain's plant and animal life that is conducted every six or seven years. In this way, they were able to track the changes that happened between 1990 and 2007 at 479 sites around Britain. They looked for evidence of introduced species outcompeting native ones, and examined the effect of newcomers (え)
over much longer periods of time.

[4] What counts as native and what as foreign is not as clear-cut as it might be. The two researchers actually recognized three categories. True natives are those present naturally from ancient times. In practice, most of these would have arrived after the end of the last ice age 10,000 years ago when the climate of Britain began to resemble that of today. Before this time, the small part of Britain not buried under ice would have been tundra,*² and would have had quite different plant life. The second category is archaeophytes. These 'ancient introductions' were brought to Britain before 1500 — that is, before plants started arriving from the Americas. The third type, neophytes, by contrast, are plants introduced after 1500.

[5] There was no suggestion of the newcomers getting out of control. Natives dominated in both the total number of species and in the amount of area covered. Although almost 20% of species recorded by the survey of 2007 were aliens, all 50 of the most geographically widespread species were native. Even extending the count as far as the top 100 most widespread species, there were only seven outsiders (four archaeophytes and three neophytes). In terms of total area covered or abundance, aliens did a bit better. Even so, only 11 of the 100 most abundant species counted this way were alien (three archaeophytes, eight neophytes). And, though there were changes between 1990 and 2007 in the abundance of many species, natives were as likely as either archaeophytes or neophytes to increase or to decrease.

[6] The upshot, Dr. Thomas and Dr. Palmer suggest, is that British plant species are more than capable of holding their own against newcomers — whether those newcomers have been around for several centuries or are more recent immigrants. This does not mean that all introduced species are without problems. Japanese knotweed*3, for example, is very destructive of the foundations of buildings. But buildings are not plants. And, if inconvenience to human beings is the standard for judgment, some natives are just as bad. Ragwort*3, for instance, is poisonous to horses and tends to grow in fields where they feed.

[7] The situation is different for invasive animals. There is no doubt that the introduction into Britain of North American grey squirrels was bad for the native red variety, which is extinct*1 in all but a handful of places. In other places, the introduction of rats, cats, and pigs onto small islands has often had a disastrous effect on local animal populations. But plants seem relatively harmless. In this context, Dr. Thomas and Dr. Palmer think it odd that only 820 of the species listed in the Global Invasive Species Database (a register kept by the International Union for the Conservation of

Nature) are animals, whereas 3,163 are plants.   Although the research was drawn only from Britain, it suggests the database's invasive plant list could do with cutting.

[8]   Some conservation groups object to introduced species just
                                    (5)
because they are alien.   Their view seems to be that the way things are today represents a "natural" state of affairs, changes from which are to be
                                                              (B)
regretted.   But in fact, nature is always changing, even without human intervention.   Thus, lack of change is probably as unnatural as the modern reality of introductions from distant lands.   And if those introductions are increasing biodiversity, what's not to like?
                          (C)

語注*

*1 extinction：絶滅，to be extinct：絶滅している

*2 tundra：ツンドラ，凍土帯

*3 Japanese knotweed，ragwort：雑草の種類（タデ，サワギク）

問1 下線部(1)～(5)の語について，意味が最も近いものをそれぞれイ～ニから一つ選び，その記号を解答用紙にマークせよ。

(1) outcompeting

    イ improving   ロ doing better than

    ハ supporting   ニ making it easy for

(2) widespread

    イ spacious   ロ rare

    ハ common   ニ withdrawn

(3) upshot

    イ conclusion   ロ selection

    ハ confusion   ニ satisfaction

(4) odd

    イ strange   ロ traditional

    ハ threatening   ニ familiar

(5) object to

    イ invite   ロ oppose

    ハ welcome   ニ respond to

問2 下線部(A)～(C)の内容として最もふさわしいものをそれぞれイ～ニから一つ選び，その記号を解答用紙にマークせよ。

(A) are more than capable of holding their own

    イ are able to lean   ロ are fairly ineffective

    ハ are more flexible   ニ are quite successful

(B) changes from which are to be regretted

    イ changes to the current environment are undesirable

    ロ changes to the current environment are complex

    ハ the author doubts whether change is occurring

    ニ regrettably, nature cannot be changed

(C)　what's not to like

　　イ　introductions create revolutions

　　ロ　introductions are usually harmful

　　ハ　you cannot disagree with introductions

　　ニ　the effect of introductions is hard to describe

問3　文中の下線部(あ)～(え)の中から，意味の異なるものを一つ選び，その記号を
　　解答用紙にマークせよ。

　　(あ)　aliens　　　　　　　　　　　　(い)　locals

　　(う)　introductions　　　　　　　(え)　newcomers

問4　以下の(1)～(6)の問いの答えとして最も適切なものをイ～ニの中から一つ選
　　び，その記号を解答用紙にマークせよ。

　(1)　According to paragraph [3], what is the purpose of the research by
　　　Drs. Thomas and Palmer?
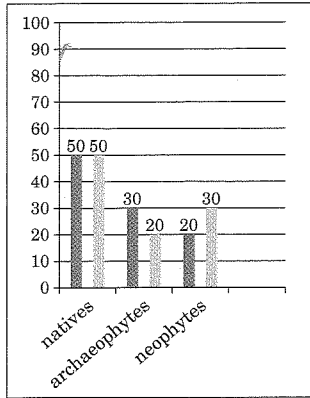
　　　イ　to draw a map of all the sites where data was collected

　　　ロ　to track the introduction of animal life before 1990

　　　ハ　to show how British plant life changes every six or seven years

　　　ニ　to discover how new and old plants interact over time

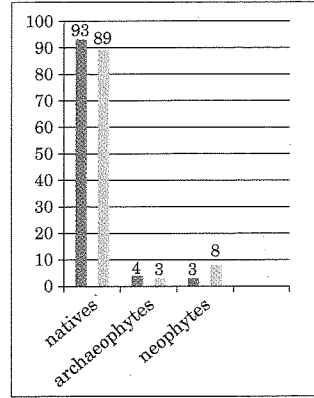　(2)　According to paragraph [4], how are British plants categorized?

　　　イ　Native plants are categorized by the date of their introduction.

　　　ロ　Non-native plants are categorized by the date of their
　　　　introduction.

　　　ハ　Native plants are difficult to categorize by the date of their
　　　　introduction.

　　　ニ　Non-native plants are difficult to categorize by the date of their
　　　　introduction.

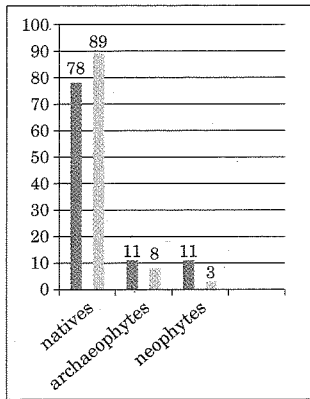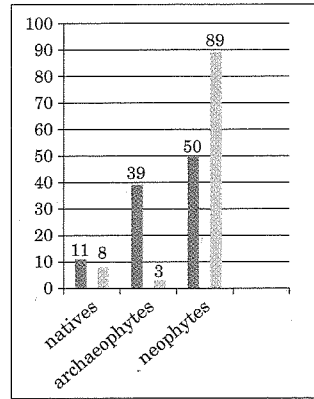(3) Which graph below best represents the results of the 2007 plant survey discussed in paragraph [5]?

イ

	100 90 80 70 60 50 40 30 20 10 0	
	50 50	30 20	20 30

natives   archaeophytes   neophytes

ロ

	100 93 89 90 80 70 60 50 40 30 20 10 0	
		4 3	3 8

natives   archaeophytes   neophytes

ハ

	100 90 80 70 60 50 40 30 20 10 0	
	78 89	11 8	11 3

natives   archaeophytes   neophytes

ニ

	100 90 80 70 60 50 40 30 20 10 0	
	11 8	39 3	50 89

natives   archaeophytes   neophytes

▓ Number of most widespread species out of 100

░ Number of most abundant species out of 100

(4) According to paragraphs [6] and [7], what is the difference between invasive plants and invasive animals?

イ Plants adjust more easily to new environments than animals.

ロ Plants have more significant effects on natives than animals.

ハ Plants don't threaten natives, but animals do.

ニ We will not know the difference until the 22nd century.

(5)　What is the main message of this passage?

　　イ　Not all environmental change is bad.

　　ロ　Competition provides advantages.

　　ハ　Invasive animals may endanger humans.

　　ニ　More invasive plants than animals exist.

(6)　What is the best title for this passage?

　　イ　Plants vs. animals

　　ロ　Prevention of environmental problems

　　ハ　Co-existence among plants

　　ニ　Survival of the fittest

〔1〕 I assume that when you travel in time you end up at the same spot on the Earth's surface. At least, that's how it worked in the *Back to the Future* movies. If so, what would it be like if you traveled forward in time one million years or even a billion years, starting in Times Square, New York?

〔2〕 Eventually humans will die out. Nobody knows when, but nothing lives forever. Maybe we'll spread to the stars and last for billions of years. Maybe civilization will collapse or we'll all be overcome by disease and famine. Maybe we'll all be killed by nano-sized robots hours after you read this. There is no way to know.

〔3〕 A million years is a long time. It's several times longer than our current species of humans, *homo sapiens*, has existed, and a hundred times longer than we have had written language. It seems reasonable to assume that however the human story plays out, in a million years we will have moved on to a different stage.

〔4〕 Without us, the Earth's geology will grind on. Winds, rain, and sand will dissolve and bury the remains of our civilization. Climate change caused by human activity will probably delay the start of the next glaciers*1, but the cycle of ice ages will not have ended. Eventually the glaciers will advance again. A million years from now, few remains of human society will exist.

〔5〕 Our most lasting remains will probably be the layer of plastic that we've deposited across the planet. By digging up oil, processing it into durable and long-lasting plastics and spreading it across the Earth's surface, we've left remains that could outlast everything else we do. Our plastic will become shredded and buried. Perhaps some microbes*2 will learn to digest

it. However, it is most likely that a million years from now a layer of bits of plastic — our shampoo bottles and shopping bags — will serve as a chemical monument to our civilization.

［6］ In a billion years, the situation will change again. The Sun is gradually brightening. For three billion years a complex system of feedback loops has kept the Earth's temperature relatively stable as the Sun has grown steadily warmer. In a billion years, these feedback loops will have stopped. Our oceans, which <u>nourished</u> life and kept it cool, will have
(5)
turned into its worst enemy. They will boil away in the hot Sun, surrounding the planet with thick clouds and causing extreme greenhouse effects. The surface of the Earth itself will begin to boil. In a billion years, the Earth will become a second Venus*3.

［7］ Eventually, after several billion more years the Earth will be <u>consumed</u> by the expanding Sun. Many of the molecules that made up
(6)
Times Square will be blasted outward by the dying Sun. These dust clouds will drift through space, perhaps collapsing to form new stars and planets.

［8］ If humans escape the solar system and live longer than the Sun, our <u>descendants</u> may someday live on one of these planets. Atoms from
(7)
Times Square, cycled through the center of the Sun, will form our new bodies. One day, either we will all be dead, or we will all be New Yorkers.

語注*

*1 glaciers：氷河

*2 microbes：微生物

*3 Venus：金星

問1 下線部(1)～(7)の語について，意味が最も近いものをそれぞれイ～ニから一つ選び，その記号を解答用紙にマークせよ。

(1) Eventually

    イ At first   ロ At least   ハ Incidentally   ニ Finally

(2) disease

    イ fineness   ロ coldness   ハ roughness   ニ sickness

(3) remains

    イ parks   ロ cities

    ハ ruins   ニ memories

(4) shredded

    イ dug up   ロ cut up

    ハ melted down   ニ cooled down

(5) nourished

    イ bred   ロ suffered   ハ declined   ニ heated

(6) consumed

    イ absorbed   ロ lit up

    ハ compromised   ニ kept up

(7) descendants

    イ immigrants   ロ ancestors

    ハ successors   ニ defenders

問2 以下の(1)〜(7)の問いの答えとして最も適切なものをイ〜ニの中から一つ選び，その記号を解答用紙にマークせよ。

(1) Put the predicted events in the right time order.

　　a) The Earth burns up.

　　b) The system of feedback loops stops.

　　c) The oceans boil away.

　　d) New stars and planets form.

　　イ　b — c — a — d　　　　　　　ロ　b — c — d — a

　　ハ　c — b — a — d　　　　　　　ニ　c — b — d — a

(2) What does paragraph [4] suggest?

　　イ　Nature will continue beyond human civilization.

　　ロ　Climate change will stop the advance of glaciers.

　　ハ　The death of human beings will lead to the death of the Earth.

　　ニ　Our civilization is flexible enough to survive natural disasters.

(3) What does paragraph [5] suggest?

　　イ　We should rely on reusable energy in the future.

　　ロ　Customers should refrain from receiving plastic bags.

　　ハ　Shampoo bottles and shopping bags damage our environment.

　　ニ　A layer of plastic will represent our civilization.

(4) What does the sentence "the Earth will become a second Venus" in paragraph [6] mean?

　　イ　Life on the Earth will be impossible.

　　ロ　The oceans will still be beneficial for us.

　　ハ　The temperature of the Earth will be under control.

　　ニ　Venus can reproduce itself.

(5)   What does paragraph [7] predict?

   イ   Times Square will collapse.

   ロ   The Sun will shrink.

   ハ   The Earth will disappear.

   ニ   We can overcome future water shortages.

(6)   What does the sentence "we will all be New Yorkers" in paragraph

    [8] mean?

   イ   A population explosion will break out in New York.

   ロ   Atoms from the Earth will become part of humans on future

      planets.

   ハ   Humans will rebuild a city like New York on another planet.

   ニ   Recycled matter from other planets will become part of the Earth.

(7)   Which of the following would be the best title for the text?

   イ   Revival of the Sun

   ロ   Escape from the solar system

   ハ   Mystery of the cosmos

   ニ   Our changing Earth