東京医科大学

受験番号					氏名	

2018 年度

英　　語

注　意　事　項

1. 試験開始の合図があるまで，この問題冊子を開いてはいけない。
2. この問題冊子は 15 頁ある。試験開始後，頁の落丁・乱丁及び印刷不鮮明，また解答用紙の汚れ等に気付いた場合は，手を挙げて監督者に知らせること。
3. **監督者の指示にしたがって解答用紙の下記の該当欄にそれぞれ正しく記入し，マークせよ。**

   ①　**受験番号欄**

   受験番号を 4 ケタで記入し，さらにその下のマーク欄に該当する 4 ケタをマークせよ。　（例）受験番号 0025 番→ | 0 | 0 | 2 | 5 | と記入。

   ②　**氏名欄　氏名・フリガナを記入せよ。**
4. **受験番号が正しくマークされていない場合は，採点できないことがある。**
5. 解答は，解答用紙の**解答欄にＨＢ鉛筆**で正確に**マークせよ。**

   例えば | 30 | と表示された問題の正答として④を選んだ場合は，次の（例）のように**解答番号 30 の解答欄の④を濃く完全にマークせよ。薄いもの，不完全なものは解答したことにはならない。**

（例）

解答番号	解　　答　　欄
30	① ② ③ ● ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

6. 解答を修正する場合は必ず「消しゴム」で**あとが残らないように**完全に消すこと。鉛筆の色や消しくずが残ったり，  のような消し方などをした場合は，**修正したことにならない。**
7. 問題冊子の余白等は，適宜利用してよいが，どの頁も切り離してはならない。
8. 試験終了後，**問題冊子**および**解答用紙を机上**に置き，試験監督者の指示に従い退場しなさい。

第１問　次の［ 1 ］～［ 5 ］の各群の単語①～⑤のうちから，最も強いアクセント(第一強勢)の位置が，他の４つの場合と異なるものを１つずつ選びなさい。

［ 1 ］

① ex-it　② in-stance　③ oc-cur
④ prod-uct　⑤ ref-uge

［ 2 ］

① ad-e-quate　② com-pli-cate　③ em-i-nent
④ prec-e-dent　⑤ re-luc-tant

［ 3 ］

① ex-ces-sive　② or-gan-ic　③ pro-gres-sive
④ rhet-o-ric　⑤ spe-cif-ic

［ 4 ］

① ba-rom-e-ter　② ca-tas-tro-phe　③ i-ni-tia-tive
④ man-u-fac-ture　⑤ pros-per-i-ty

［ 5 ］

① an-a-lyze　② con-tra-dict　③ fas-ci-nate
④ i-so-late　⑤ rec-on-cile

第２問 次のａ～ｅの各英文の空欄 [6] ～ [10] に入れるのに最も適当なものを，それぞれ下の①～⑤のうちから１つずつ選びなさい。

a．I know he is sometimes very obstinate, but I can't [6] liking him.

① assume　② fall　③ help
④ imagine　⑤ suppose

b．"Which of his two paintings did you like best?" "I didn't like [7] ."

① any　② either　③ neither
④ ones　⑤ those

c．Some of the roads were flooded, [8] made our journey more difficult.

① it　② that　③ thus
④ what　⑤ which

d．We should be focusing on what we have [9] rather than emphasizing our differences.

① by chance　② by nature　③ in common
④ in essence　⑤ on instinct

e．The father embraced his son. No words [10] but everything was said.

① being unsaid　② have been told　③ haven't been told
④ were spoken　⑤ were not spoken

第３問　次のａ～ｅの各英文の空欄を，それぞれ下の①～⑥の語または語句で埋めて最適な英文にするとき，［ 11 ］～［ 20 ］に入る語または語句を示しなさい。

ａ．He wanted to give his daughter a piece of advice, but he left her _____ so ［ 11 ］ _____ _____ ［ 12 ］ _____ over.

① to think　② to give　③ the matter
④ her time　⑤ as　⑥ alone

ｂ．Tom was afraid to meet her father, _____ he _____ ［ 13 ］ _____ ［ 14 ］ _____ him.

① knew　② not　③ pleased
④ was　⑤ who　⑥ with

ｃ．I could not understand _____ ［ 15 ］ _____ _____ ［ 16 ］ _____ my remark.

① Bill　② made　③ so
④ upset　⑤ what　⑥ with

ｄ．Beauty was like the summit of a mountain peak; when you had reached it there _____ ［ 17 ］ _____ _____ ［ 18 ］ _____ again.

① but　② down　③ nothing
④ to come　⑤ to do　⑥ was

ｅ．Children of 9 and _____, ［ 19 ］ _____ by an adult, _____ ［ 20 ］ _____ to ride this roller coaster.

① allowed　② are　③ attended
④ not　⑤ under　⑥ unless

第4問 以下は，日本におけるインターネットの父，村井純氏のインタビュー記事を英語にしたものである。次の英文を読み，下記の問いに答えなさい。

注：the Japan Meteorological Agency：気象庁　／　bedridden：寝たきりの

I became an assistant at the Tokyo Institute of Technology after graduating from Keio University's graduate school, but I'd left a lot of files at Keio University, so I had to trek back to Keio whenever I needed them. It was a hassle, so I came up with the idea of connecting computers at Keio University and the Tokyo Institute of Technology.
イ

However, connecting only two sites did not resemble a network, so I asked the University of Tokyo [21].

In the 1960s, universities and research labs in the United States succeeded in connecting their computers experimentally and began using the network to exchange information.

I was able to connect our network in Japan with computers overseas in 1986. I was really happy when I received a message saying "hello" on my computer from a university in the United States. I sensed that our computers might finally be connected [22].

The general public started using the Internet in 1995, and it exploded out into the world. This was the birth of cyberspace, a first in human history. In the early days of the Internet, many U.S. researchers believed that everybody used English to communicate, which was why English was prerequisite for using the Internet. E-mails had to be written either in English or in Japanese [23].
ロ

I persuaded U.S. researchers to develop a technology for inputting and displaying Japanese kanji. It was hard work, but they persevered. It was not a matter of the Japanese language alone: Unless they took into account the great diversity of language and cultures around the globe, the Internet would not be able [24].
ハ　ニ

One of the achievements of the Internet was giving people equal opportunity. It also changed our way of thinking. This is particularly true with regard to Japan. Our little island country in the Far East, thought [25], was suddenly connected to the rest of the world, and its people could expand their activities beyond the waters surrounding us.

We learned that we can create great power by sharing information on the Internet. For example, by collecting information on dark clouds spotted in the sky, we can forecast when and where local heavy rain will occur. At the beginning, this idea was considered antisocial. Weather forecasts were seen [26], such as the Japan Meteorological Agency, so people thought it would cause [ヘ] and confusion around the world if the general public were allowed to send information.

In the early days of the Internet, I was told the same thing by a prominent scholar. "If you catch a cold and end up bedridden, the Internet will stop," he said. "So the government should take (ヌ) running it." However, besides letting the government do a job, you can also create things by combining everyone's strengths. The Internet changed the landscape of Japan, globalizing this island country and shifting power [27].

Today, attention is focused on a theory that the intelligence on the Internet will surpass that of mankind in 2045. The Internet connects information and knowledge from all around the world. Software can be used to analyze information and make [ト]. If we think about the progress of Internet technology over the years, it could happen around 2045.

Does this mean that the Internet would use us, instead of [28]? That would be bad. The Internet is technology created for people, so we, [チ], must remain its master.

After the crisis began at the Fukushima No. 1 nuclear power plant, I joined a group of volunteers who measured radiation levels, and we published the radiation figures on the Internet. I felt it was vital [29] and help create an

environment where people could find out what the numbers meant for them.

Some people attribute my actions [30]. I am a second-generation survivor of the U.S. atomic bombing of Hiroshima. My grandfather on my mother's side experienced the atomic bombing while at his home. At the time, he worked as a lecturer at a local university. He was showered with pieces of glass broken by the atomic blast and seriously injured. We bathed together when I was a child, and he used to tell me that glass pieces still came out of the [リ].

Soon after the bomb was dropped, my mother, who was living in Tokyo, went to Hiroshima to look for my grandfather and was subjected [31]. She told me she suffered the terrible effects of radiation, including her hair falling (ル).

My grandfather compiled survivors' essays into a book titled "Children of Hiroshima" as a material for peace education. Together with researchers at several universities, I also considered translating this book into different languages and distributing it on the Internet.

However, these essays contained the children's names, school years and family circumstances. They were collections of personal information. So I wondered whether it was appropriate(ホ) to upload them on to the Internet. In those days, the children who survived the atomic bombing had hidden that fact [32]. Even today, some of them are still suffering mentally and physically (ヲ) it. I worried about them and ultimately abandoned the plan.

Behind [33] are real people, and we must respect and support them. I believe that is the condition mankind must meet to stay master of the Internet.

(*The Japan News*, May 23, 2015, 一部改変)

A．上の英文の [21] ～ [33] に入る最も適当な語句を下の①～⑱の中から１つずつ選びなさい。

① an abundant supply of materials
② the advent of the nuclear bomb
③ all data and information
④ as the task of public organizations
⑤ depending on the occasion
⑥ due to fear of discrimination
⑦ the first city in the world to suffer a nuclear attack
⑧ from the government to the people
⑨ the other way around
⑩ to cover the whole world
⑪ to disclose the figures
⑫ to have a completely different language and culture
⑬ to head the international organization
⑭ to join in
⑮ to my grandfather's influence
⑯ to secondary radiation exposure
⑰ to those all over the world
⑱ using the alphabet

B．本文中の下線部イ～ホの語に意味が最も近いものを，それぞれ①～④の中から1つずつ選びなさい。

イ 34

① a bother
② a loss
③ a motive
④ a waste

ロ 35

① complicated
② indispensable
③ permanent
④ trustworthy

ハ 36

① perceived
② perfected
③ performed
④ persisted

ニ 37

① contrast
② heritage
③ innovation
④ variety

ホ 38

① beneficial
② right
③ unsuitable
④ wrong

C．上の英文の[　ヘ　]～[　リ　]に入る，最も適当な語を，それぞれ下の①～④の中から１つずつ選びなさい。

[　ヘ　] 39

① alert　② chaos
③ prey　④ scope

[　ト　] 40

① appointments　② judgments
③ requests　④ statements

[　チ　] 41

① human beings　② the intellectual
③ Japanese　④ the technicians

[　リ　] 42

① ashes　② debris
③ nerves　④ scars

D．上の英文の(　ヌ　)～(　ヲ　)に入る最も適当な語を，それぞれ下の①～⑨の中から１つずつ選びなさい。

(　ヌ　) 43　(　ル　) 44　(　ヲ　) 45

① after　② down　③ for　④ from　⑤ in
⑥ into　⑦ off　⑧ out　⑨ over

E．上の英文の内容と合っていると思われる文章を①～④から１つ選びなさい。

46

① When the atomic bomb hit Hiroshima, the narrator's grandfather was doing his job at school.

② For three generations, the narrator's family has endured the effects of radiation exposure.

③ The narrator translated "Children of Hiroshima" into several languages and distributed them on the Internet.

④ In order to be in control of the Internet, we must remember that each piece of data holds a personal story.

第5問 次の文章の内容と合っていると思われるものを，下に示した①～㉔のなかから6つ選びなさい。ただし，解答の順序は問いませんが，同一番号を重複使用した解答は無効とします。 47 ～ 52

注：circadian：24時間周期の，日周性の ／ time-lapse：微速度撮影の
variable：不確定要素 ／ seedling：実生の
a control group：対照群 ／ pollinator：花粉媒介者(昆虫など)

Sunflowers may be rooted to the ground, but that doesn't mean they can't dance. Each day, young sunflowers trace the path of the sun across the sky, turning their faces 180 degrees from east to west. And their slow, graceful movements continue at night. After the sun sets, the plants reorient themselves, slowly twisting their heads back to the east in anticipation of dawn.

Circadian biologist Stacey Harmer became interested in studying the motion of sunflowers after watching fascinating time-lapse videos of this dance of the plants. "At nighttime, you could see the whole plant rearranging itself, and it was such an amazing thing," she said. "I tell my students all the time that plants are capable of incredible things — we just don't notice because their time scale is different than ours."

The observation that young sunflowers track the sun is not new — Darwin himself reported the phenomenon more than 100 years ago. But until now, no one had explained how the sunflowers move and why. In a paper published this month in the journal *Science*, Harmer and her collaborators reveal the answers to these questions.

The team's first step was to plant a field of sunflowers and observe what happened before they started fiddling with variables. As the plants grew from young seedlings into mature, yellow-headed adults, the researchers found that the sun-tracking movements of the plant became less and less noticeable, until they stopped altogether. "A really common misconception is that mature

sunflowers follow the sun. Actually, they do not," Harmer said. "Mature sunflowers always face east."

The group also observed that the plants could pace their movements. For example, during the short nights of midsummer, young sunflowers took just 8 hours to swing their heads from west to east. However, during the longer nights of autumn, it took them 12 hours to accomplish the same feat.

To find out how the plants were moving, the scientists went into a field of sunflowers and marked both sides of their stems with a marker pen at regular intervals. Using a time-lapse camera, they were able to see that the east side of the stem grew longer during the day, turning the plant's head to the west. At night, the reverse was true — the west side elongated, causing the plant to face the east.

But what was controlling this growth pattern? Was it the movement of the sun or some kind of internal clock? To answer this question the researchers moved dwarf sunflowers from an outdoor field into a controlled lighting environment in the lab. The scientists report that even when the plants were grown under constant, fixed overhead artificial lighting during the day, they maintained the same head-turning rhythms they displayed in the field for several days.

In another lab experiment, the researchers messed with the sunflowers' internal clocks by exposing them to a 30-hour light cycle (instead of a 24-hour light cycle). This thoroughly confused the plants, and they wound up turning their heads farthest to the west well before the transition to dark. During the night, the plants moved erratically.

Together these results suggest that the sunflowers' movements are regulated by something other than simple growth toward the sun. Some kind of circadian clock was also controlling the plants' twists and turns.

The next question, of course, was why. Are sunflowers served by their ability to track the sun? And is there a benefit to the mature sunflowers'

decision to turn to the east?

Another series of experiments revealed the answer. Every night for 100 nights, Harmer and her collaborators went into a field of sunflowers planted in pots and rotated them so they were facing west in the morning. In multiple trials, the group found that the manipulated plants were 10% smaller compared with a control group. "That's a really big difference," Harmer said.

The group also reported that mature sunflowers have good reason to face east. The authors found that east-facing sunflowers attract up to five times the number of pollinators compared with those that were rotated in their pots so that they were facing west.

Yet another experiment showed that this is almost certainly because east-facing sunflowers are more effectively warmed by the morning sun than sunflowers that are facing west. To come to this conclusion, Harmer warmed west-facing sunflowers with a heat source until they were the same temperature as east-facing sunflowers.

Pollinators were more likely to come to the artificially warmed west-facing sunflowers than those that had not been warmed. However, the pollinators still preferred the east-facing sunflowers.

Although the scientists uncovered many of the sunflower's secrets, Harmer said there is still much to learn.

(*The Japan News*, August 5, 2016, 一部改変)

47 ~ 52

① The author calls the sunflowers' movement in opposite direction to the sun, a dance.

② Sunflowers are fixed to the ground preventing them from changing direction.

③ During the night, the sunflowers turn their faces slowly back towards the east and await dawn.

④ Some of the young sunflowers quickly move themselves from west to east just before the sunrise.

⑤ Most of the incredible things sunflowers do are overlooked by human beings even though their time-scale is the same as ours.

⑥ Harmer states that plants are incredible because they reset themselves at night.

⑦ More than a decade ago, Darwin noted how sunflowers responded to the direction of the sun.

⑧ The researchers found that the sun-tracking movements became inconspicuous in proportion to the growth of the sunflowers.

⑨ As is well known the grown-up sunflowers don't follow the sun.

⑩ The sunflowers movements were regulated only by the circadian clock.

⑪ It takes sunflowers more time to move their heads from west to east in autumn than in summer because the night is longer.

⑫ The researchers marked both sides of the stems with pencils at regular intervals to examine the movements of the plants.

⑬ The researchers have found out that the movement of the sunflowers' heads has something to do with the growth of their roots.

⑭ The time-lapse camera revealed how the east side of the stem grew longer during the day causing the plant's head to turn to the west.

⑮ Under constant, fixed overhead lighting the sunflowers instantly lost a regular pattern of movement.

⑯ The sunflowers had no trouble adjusting to a 30-hour light cycle and started to make a new pattern of movement.

⑰ Scientists tampered with the sunflowers' internal clocks by using a 30-hour light cycle which caused the plants to move in confusion.

⑱ For 100 nights Harmer and her team rotated the sunflowers in pots to face the east in the morning.

⑲ The deceived plants under experiment were one tenth the length of those in the control group.

⑳ The sunflowers forced to face west in the morning grew poorly compared with the ordinary sunflowers.

㉑ The east-facing sunflowers attracted twice the number of pollinators in comparison to the west-facing plants.

㉒ The reason why pollinators are attracted to the east-facing sunflowers is due to their size.

㉓ Pollinators prefer east-facing sunflowers because of their artificial warmth.

㉔ Harmer concludes that there isn't much else to learn from the sunflowers.