

## 学力試験 コミュニケーション英語Ⅰ・Ⅱ

## I. 次の英文を読んで、以下の1～5の問いに答えなさい。

The brain, like any other body part, gets old. However, not all brains **age**<sup>1</sup> the same way. For example, women's brains may age more slowly than men's. That is the finding of a U.S. study from Washington University School of Medicine in St. Louis, Missouri.

① Researchers there wanted to find out how the brain uses sugar. To do that, they studied just over 200 brains of men and women aged 20 to 80. They used **PET scans**<sup>2</sup> to look at the flow of oxygen and sugar in the brains.

② The researchers found that the brains of women looked nearly four years younger than the brains of men who were born in the same year. Their findings suggest that the brains of men and women may use sugar differently as they age.

But the researchers do not know why. Manu Goyal, the lead doctor of the study, explained why the work is important. "How the brain uses fuel", he wrote, "might help us understand some of the differences we see between men and women as they age."

Parts of the brain get smaller, "especially those important to learning and other **complex**<sup>3</sup> mental activities." Communication between **neurons**<sup>4</sup> may decrease. Blood flow may **lessen**<sup>5</sup> and **inflammation**<sup>6</sup> may increase. ③ All these changes slow our **cognitive**<sup>7</sup> abilities. We have trouble remembering things, finishing complex tasks or paying attention.

**Given**<sup>8</sup> what scientists already know about aging, the recent study about sex differences in the brain has raised some questions. For one, if women's brains age more slowly than men's, why do more women get **Alzheimer's disease**<sup>9</sup>?

Alzheimer's disease is a **progressive**<sup>10</sup> **brain disorder**<sup>11</sup> that cannot be stopped. ④ It slowly destroys memory, thinking skills and, eventually, the ability to carry out the simplest of tasks. Alzheimer's does not have a cure. However, doctors say that between 50 to 60 percent of Alzheimer's cases can be prevented by simple lifestyle changes.

(註) **age**<sup>1</sup> = get old(er)      **PET scans**<sup>2</sup> PET 検査(ガンの早期発見用検査)      **complex**<sup>3</sup> 複雑な  
**neurons**<sup>4</sup> ニューロン、神経細胞      **lessen**<sup>5</sup> = decrease      **inflammation**<sup>6</sup> 炎症      **cognitive**<sup>7</sup> 認知の  
**Given**<sup>8</sup> = Considering      **Alzheimer's disease**<sup>9</sup> アルツハイマー症      **progressive**<sup>10</sup> 進行性の  
**brain disorder**<sup>11</sup> 脳障害

1 下線部①の Researchers が突き止めようとしたのは、どんなことですか、日本語で簡潔に答えなさい。

2 下線部②の The researchers が発見したことは、どんなことですか、日本語で簡潔に答えなさい。

3 下線部③の All these changes が、具体的に示している内容を三点、日本語で簡潔に答えなさい。

4 下線部④の英文を、冒頭の "It" の表す内容を明確にして、日本語になおしなさい。

5 下の(1)～(5)の英文が、上の英文の内容に一致する場合は T を、一致しない場合は F を記入しなさい。

(1) The researchers studied sugar in women's brains because they eat more sugar than men.

(2) People who eat too much sugar are sure to get Alzheimer's disease.

(3) The researchers haven't yet discovered what makes women's brains age more slowly.

(4) Alzheimer's is curable if treated early enough.

(5) Alzheimer's can be prevented 50 to 60 percent of the time.

II. 次の 1~3 の英文を読み、それぞれの質問に答えなさい。

1 Short periods of sleep may help our brains work better, or so says a recent study on **napping**<sup>1</sup>.

Past studies have shown that napping can help babies and young children learn better. And napping can help brain performance in older adults. Taking a nap may also help this group of people fight off age-related memory loss.

(註) **napping**<sup>1</sup> 昼寝、仮眠

(問) **napping** は、「babies や young children の学習能力を向上させるかもしれない」とありますが、それでは、高齢者に対しては、どんなことが期待されていますか、二点について、日本語で簡潔に答えなさい。

2

この問題は、著作権の関係により公開していません。

3

この問題は、著作権の関係により公開していません。

III. 次の (1)~(5) の英文の( \* ) 内に入る最も適切な語(句)を (A)~(D) から選び、その記号を答えなさい。

(1) You should ( \* ) your shoes when you enter a house in Japan.

(A) make up (B) get out (C) take off (D) go off

(2) My father ( \* ) the moon with his telescope last night.

(A) observed (B) arranged (C) invented (D) approached

(3) She goes to the hospital once ( \* ) week for the rehabilitation of her broken leg.

(A) the (B) a (C) in (D) within

(4) Heart disease is the leading ( \* ) death in Japan.

(A) figure out (B) bring to (C) account on (D) cause of

(5) Could you sit over there, and ( \* ) in this health questionnaire?

(A) take (B) try (C) fill (D) hold

IV. 次の (1)~(5) の日本語の意味に合うように、【     】内の語(句)を並べ替え、2番目と5番目にくる語(句)の記号を答えなさい。

(1) 寝る前に歯を磨きましたか。

Did you 【 ア your teeth, イ to, ウ going, エ brush, オ before 】 bed?

(2) 医者は患者の話に耳を傾けなければならない。

【 ア say, イ patients, ウ must, エ to, オ doctors, カ what, キ listen 】 .

(3) 右ひじを曲げることができますか。

【 ア you, イ right, ウ can, エ your, オ elbow, カ bend 】 ?

(4) これがあなたの高血圧の処方箋です。

【 ア high blood pressure, イ is, ウ your, エ the prescription, オ for, カ here 】 .

(5) 私たちは新しいクライアントのケアについて話し合った。

【 ア for, イ about, ウ the care, エ we, オ talked 】 the new client.

V. 次の英文中の空所 (1)~(10) に入る最も適切な語(句)を、下の a ~ j から選び、その記号を答えなさい。

The Earth is changing fast--with a little help from people, of course. Our use of coal and oil for energy has led to ( 1 ). This warming has led to an increase in temperatures and ( 2 ), and much less polar ( 3 ). But warming is not the only effect on the planet. Climate change means more extreme ( 4 ) of all kinds: heat, cold, rain, and drought.

The effects of human activity can also be seen in the planet's plant and animal life. Demand for tree products and farmland leads to ( 5 ), and global travel provides easy transportation for invasive ( 6 )---plants and animals that are brought in from other places.

Fortunately, even though we humans are the ( 7 ), we can also be part of the ( 8 ). We can use much less coal and oil if we practice conservation, for example, and better land management would save forests from being destroyed. Invasive plants and animals can even be ( 9 ), but only with a good understanding of the ( 10 ).

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|------------------|---------------|-------------------|---------------|----------------|
| a. deforestation | b. cause      | c. global warming | d. controlled | e. environment |
| f. weather       | g. sea levels | h. species        | i. ice        | j. solution    |