

九州大学 医学部 歯学部
前期

平成27年度入学試験問題

英

語

英 語 II
リーディング
ライティング

(注意事項)

1. 問題冊子は指示があるまで開かないこと。
2. 問題冊子は11ページ、解答紙は5枚あります。「始め」の合図があったらそれぞれを確認すること。
3. 解答紙それぞれの2箇所を受験番号を記入すること。
4. 解答はすべて解答紙の所定の欄に記入すること。
5. この教科は200点満点です。なお、文学部については150点満点に、経済学部経済工学科については300点満点に、農学部については250点満点に換算します。

英

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ラ イ テ イ ン グ

[1] 次の英文を読み、設問に答えなさい。(47点)

There is one episode from the history of medicine that illustrates particularly well how an evidence-based approach forces the medical establishment to accept the conclusions that emerge when medicine is put to the test. Florence Nightingale, today a well-known figure, was a woman with very little reputation, but she still managed to win a bitter argument against⁽¹⁾the male-dominated medical establishment by arming herself with solid, unquestionable data. Indeed, she can be seen as one of the earliest advocates of evidence-based medicine, and she successfully used it to transform Victorian healthcare.

Florence and her sister were born during an extended and very productive two-year-long Italian honeymoon taken by their parents William and Frances Nightingale. Florence's older sister was born in 1819 and named Parthenope after the city of her birth — Parthenope being the Greek name for Naples. Then Florence was born in the spring of 1820, and she too was named after the city of her birth. It was expected that Florence Nightingale would grow up to live the life of a privileged English Victorian lady, but as a teenager she regularly claimed to hear God's voice guiding her. Hence, it seems that her desire to become a nurse was the result of a "divine calling." This distressed her parents, because nurses were generally viewed as being poorly educated, indecent and often drunk, but these were exactly the prejudices that Florence was determined to crush.

The prospect of Florence nursing in Britain was already shocking enough,⁽²⁾ so her parents would have been doubly terrified by her subsequent decision to work in the hospitals of *the Crimean War. Florence had read scandalous reports in newspapers such as **The Times*, which highlighted the large number of soldiers who were dying of cholera and malaria. She volunteered her services, and by November 1854 Florence was running the Scutari Hospital in Turkey, which was notorious for its filthy wards, dirty beds, blocked sewers

and rotten food. It soon became clear to her that the main cause of death was not the wounds suffered by the soldiers, but rather the diseases that were widespread under such filthy conditions. As one official report admitted, "The wind blew sewer air up the pipes of numerous outdoor toilets into the corridors and wards where the sick were lying."

Nightingale set about transforming the hospital by providing decent food, clean linen, clearing out the drains and opening the windows to let in fresh air. In just one week she removed 215 handcarts of filth, flushed the sewers nineteen times and buried the carcasses of two horses, a cow and four dogs which had been found in the hospital grounds. The officers and doctors who had previously run the institution felt that these changes were an insult to their professionalism and fought her every step of the way, but she pushed ahead regardless. The results seemed to validate her methods: in February 1855 the death rate for all admitted soldiers was 43 per cent, but after her reforms it fell dramatically to just 2 per cent in June 1855. When she returned to Britain in the summer of 1856, Nightingale was greeted as a hero.

注

*the Crimean War: クリミア戦争(1853-56年; ロシアがトルコ・フランス・英国・サルディニアを相手に主にクリミア半島で戦った)

**The Times*: 『タイムズ』(1785年創刊の英国の新聞)

問 1. 下線部(1)を日本語に訳しなさい。

問 2. 下線部(2)の理由を日本語で述べなさい。

問 3. 下線部(3)を日本語に訳しなさい。

問 4. the results と her methods それぞれが具体的に表すものを簡潔に述べた上で、下線部(4)の内容を日本語で説明しなさい。

[2] 次の英文を読み、設問に答えなさい。(44点)

Biologically, when people are aroused to some degree of anger, their heart rate, blood pressure, and *testosterone level all increase. That might suggest that anger upsets and harms us. But in fact, levels of the stress hormone cortisol drop, suggesting that anger helps people calm down and get ready to address a problem—not run from it. In studies in which she and her colleagues induced indignation among volunteer subjects, Jennifer Lerner, a psychologist at Harvard, found that anger diminished the effects of cortisol on heart reactivity.

Although anger has long been considered a fully negative emotion, recent (1) neuroscience has overturned that view. Scientists know that two basic motivational forces underlie all behavior—the impulse to approach, or move toward something desired, and the impulse to withdraw, or move away from unpleasantness. *Hardwired in the brain, these behaviors are governed by the frontal *cortex, which acts as the executive branch of the emotions. Brain *imaging and electrical studies of the brain consistently show that the left *frontal lobe is crucial to establishing approach behaviors that push us to pursue desired goals and rewards in rational, logical, systematic, and ordered ways, and that activation of the right frontal cortex is tied to the more negative, withdrawal motivational system, marked by inhibition, timidity, and avoidance of punishment and threat.

Brain scans show that anger significantly activates the left anterior (frontal) cortex, associated with positive approach behaviors. Anger, moreover, appears to be utterly rewarding, even pleasurable, in studies showing predominant left-brain activation when angry subjects perceive they can make things better.

“Expecting to be able to act to resolve the anger-arousing event should yield greater approach motivational intensity,” contend social psychologists

Charles Carver of the University of Miami and Eddie Harmon-Jones of the University of New South Wales, longtime collaborators in anger scholarship. In a variety of studies, Harmon-Jones has found that subjects who score high on a scale that measures a tendency to anger display a characteristic asymmetry in the prefrontal cortex — they exhibit higher levels of left anterior *EEG activity and lower levels of right anterior activation. Randomly insulting subjects, compared with treating them neutrally in verbal communications, stimulates greater relative left frontal activity.

Spurred by the findings on anger, neuroscientists have begun to move away from thinking of any emotion as either negative or positive, preferring instead to characterize emotions by “motivational direction” — whether they stimulate approach behaviors or avoidance/withdrawal behaviors. Viewed within this framework, they explain, it’s not strange that anger produces happiness. “The case of anger,” reports a team of Spanish scientists led by Neus Herrero, “is different because although it is considered or experienced as negative, based on findings of increased left brain activity it produces a motivation of closeness, or approach.” When we get mad, in other words, we ⁽³⁾ “show a natural tendency to get closer to what made us angry to try to eliminate it.”

注

*testosterone: テストステロン(男性ホルモンの一種)

*hardwired: (機能が)物理的に組み込まれた

*cortex: 皮質

*imaging: 画像化

*frontal lobe: (大脳の)前頭葉

*EEG: Electroencephalogram(脳波)

問 1. anger とほぼ同義の語を第 1 段落の中から一つ抜き出さない。

問 2. 下線部(1)のような事態が導かれたのは、脳の研究によりどのようなことが明らかになったからなのか。左脳と右脳の機能の違いに触れた上で、100 字以内の日本語でまとめなさい(句読点も字数に含む)。

問 3. 下線部(2)の this framework とはどのような枠組みか、日本語で説明しなさい。

問 4. 下線部(3)を日本語に訳しなさい。

〔 3 〕 次の英文を読み，設問に答えなさい。(49 点)

Our ancestors began to scrawl pictures on rock walls, to represent in images animals that weren't present. They drew events that took place in the past or might happen in the future. Something had changed in the way their brains functioned, something that opened up the ability to see beyond the now. At the same time as reacting to the world about them, these transformed creatures were able to deal with "what if?" to dream, to plan, to anticipate. They had become conscious.

Watch a TV documentary set in an African game park and the response of prey animals like a herd of *gazelle to the presence of predators seems unbelievably strange from the human viewpoint. If a lioness is lying at the edge of the herd, watching intently, picking out a target, this fearsome predator is likely only to be eyed briefly, if nervously, by its potential victims before the gazelle return to cropping the grass. We would be thinking, "I've got a problem here. The lioness could hurt me or even kill me. I think I'll sneak away, just in case. Or at least I'll make sure there's a fatter, slower gazelle between me and the lioness." But this ability to project into the future, to be aware of potential circumstances and analyze consequences, the gazelle. It is only when the attack commences that a flight response is triggered.

There are clear survival benefits from being able to consider what might be as well as what is. It gave humans the ability to assess risk, to make decisions based on what might happen, rather than reacting solely to the immediate threat. Seeing beyond the now brought us literature and religion, science and civilization. Yet perhaps the greatest benefit that would come from this change was the realization that we ourselves could become different in the future. Thanks to the ability to ponder what might be, our predecessors were able to think, "I want to be different from the way I am now,"

kickstarting the urge to upgrade the human form.

(5) The result was something biologically unique. Human beings began to turn themselves into something new, not through the painfully slow process of natural selection but by our own *intervention — our desire to improve has driven us to upgrade continuously.

注

*gazelle: レイヨウ (群れで暮らす草食動物の一種)

*intervention: 介入・干渉

問 1. 下線部(1)と趣旨の異なる記述を、本文中の波線部(ア)~(オ)の中から一つ選び、記号で答えなさい。

問 2. 下線部(2)が描写している状況を、日本語で簡潔に述べなさい。

問 3. 空所(3)に入る最も適切な語句を以下のA~Dの中から一つ選び、記号で答えなさい。

A. is shared by

B. isn't present in

C. is unique to

D. isn't equipped with

問 4. 下線部(4)を日本語に訳しなさい。

問 5. 下線部(5)で biologically unique とされている結果はどのようなものか、日本語で答えなさい。

[4] 次の英文の説明と指示に従い、英語の文章を書きなさい。(30点)

Emoji—pictorial representations of facial expressions and inner emotions—are now an integral part of our daily communication. At first they were available only in Japan, but many *emoji* characters have been incorporated into Unicode, thus PC and mobile phone users around the world have access to these symbols and many people enjoy adding them to their instant text communications. Some argue that these characters greatly help facilitate electronic communication, in which body language and vocal tones are often absent. On the other hand, others point out that they might spoil our verbal language skills because they allow us to communicate with each other without elaborating on what to say in words. State your opinion about this issue in 100–120 English words.

〔5〕 次の文の下線部(1), (2)を英語に訳しなさい。(30点)

我々は批判されることに弱い。自分の意見を批判されると頭に血がのぼり、自分自身が攻撃されたように感じ、相手が何を言っているのかもよくわからなくなる。⁽¹⁾わたしも哲学者という仕事柄、面と向かって他人の意見を批判する機会が多いが、非常に有能な哲学者でも何を批判されているのか理解できず、話がかみあわないということがよく起こる。逆の立場で、わたし自身も他人の批判に対する自分の回答をあとで読み返して反省することは多い。

こういう場合、どうしたらいいだろうか。まず、自分の意見に感情移入しすぎないことである。自分で思いついた愛着のある説でも、場合によっては切り捨てる覚悟がないと、結果的には自分にはねかえってくることになる。相手に譲歩するのはプライドが許さないという人もいるだろう。そういう人は、自分が今持っている意見を無理やり弁護し通すことにプライドを持つのではなく、自分の過ちを素直に認めるということにプライドを持ってもらいたい。⁽²⁾それが結局は実り多い論争への道でもあり、実り多い論争からは自分自身も得るものが多いはずである。次に、自分の意見に対する批判は必ずしも自分自身に対する攻撃ではないということをわきまえることが大事である。批判されて頭に血がのぼっていると感じたら、自分が落ち着くまで返事をするのを待つのも実際的な方法として有効である。