

秋田大学

CM

平成 27 年度個別学力試験問題(医学部医学科)

英 語

前 期 日 程

注 意 事 項

- 1 試験開始の合図があるまで、この問題冊子の中を見てはいけません。
- 2 この問題冊子は、8 ページあります。解答用紙は 3 枚、下書き用の白紙は 1 枚あります。問題は 3 題あります。3 題すべてに解答しなさい。
試験中に問題冊子の印刷不鮮明、ページの乱丁・落丁および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なさい。
- 3 監督者の指示に従って、解答用紙に受験番号を記入しなさい。
- 4 解答は、解答用紙の該当欄に記入しなさい。
- 5 配付された解答用紙は持ち帰ってはいけません。
- 6 試験終了後、問題冊子は持ち帰りなさい。

I 次の英文を読み、以下の設問に答えなさい。

The Greenhouse Effect

[1] In recent years, (aware / become / have / of / people)⁽¹⁾ a new ecological problem. The over-cutting of trees and the increased use of fossil fuels*¹ for industry and transportation have caused a build-up of carbon dioxide [CO₂] in the atmosphere. In what is known as the **greenhouse effect**, the ever-increasing layer of carbon dioxide (the earth's / from / heat / surface / traps)⁽²⁾.

[2] Increasing numbers of scientists believe that (). By 2050, they say, worldwide temperatures will have risen from 2 to 5 degrees Celsius. If the increase is only 2 degrees, the climatic changes will be fairly mild. But if the increase is 5 degrees, the climatic changes will be major — as they were after the last Ice Age, when worldwide temperatures increased by 3 degrees Celsius.

[3] The warmer temperatures will cause the ice caps in the Arctic and Antarctic to melt faster. Low-lying coastal areas around the world will be flooded, forcing some 2 billion people to move inland. People will have to build dykes*² to keep the salt water from penetrating the soil and ruining both freshwater supplies and farmland. Farmers will have to use different crops that are more suited to the changed climate. Thousands of species of plants and animals will (). There will be no more redwoods, no more seals or polar bears. But other species, such as the African tsetse fly*³ that causes sleeping sickness, will expand into a much larger range.

“The Lungs of the Earth”

[4] Trees serve many ecological functions. They prevent soil erosion and flooding. They provide fruits and other foods for people and animals. Most

important of all, perhaps, they remove carbon dioxide from the atmosphere and release oxygen. In other words, they act as “the lungs of the earth.” The more effective forests are, the less the greenhouse effect.

[5] The largest remaining “lung” in the world is the rainforest of the Amazon, most of which lies in Brazil. This forest contains about one-fourth of the world’s forest area and provides about one-half of its oxygen. Since 1965, however, it has been subject to massive deforestation. First, the government built roads into the interior and provided billions in tax incentives for cattle grazers.*4 Hundreds of thousands of ranchers*5 moved in and cleared the land, only to find that they could plant grasses for at most three years before the soil wore out.*6 Then came the timber industry, searching for tropical hard-woods. Gold prospectors*7 polluted the Amazon’s tributaries*8 with mercury,*9 used in processing gold. Landless peasants*10 burned millions of acres of timber to clear land for farming. The Brazilian government is building hydroelectric dams*11 that will flood vast areas of the Amazon basin.

[6] As a result, each year the Amazon’s rainforest loses an area bigger than the Netherlands.*12 As one scientist put it, “It’s equivalent to clearing a football field every five seconds.” If the destruction continues at the present rate, the entire rainforest will be gone in 25 to 30 years.

出典 : Paul Thomas Welty and Miriam Greenblatt, *The Human Expression: World Regions and Cultures* (1992) (一部改変)

fossil fuels*1 = 化石燃料

tsetse fly*3 = ツエツエバエ

ranchers*5 = 牧場経営者

prospectors*7 = 試掘者

mercury*9 = 水銀

hydroelectric dams*11 = 水力発電用ダム

dykes*2 = 堤防

grazers*4 = 放牧者

wore out*6 = 消耗した

tributaries*8 = 支流

peasants*10 = 農夫

the Netherlands*12 = オランダ

問 1 段落[1]の(1)および(2)の括弧内に与えられている語句を並べかえて、もっとも適切な表現にきなさい。

問 2 段落[2]の()に入るもっとも適切な表現を以下の選択肢から一つ選び、その記号を書きなさい。

- (a) because of the heat build-up, the earth is growing warmer
- (b) because of the build-up of carbon dioxide, the earth is growing colder
- (c) the build-up of carbon dioxide has nothing to do with the earth's temperatures
- (d) the heat build-up is not due to human activities

問 3 段落[3]の()に入る英単語を以下の選択肢から一つ選び、その記号を書きなさい。

- (a) accept
- (b) appear
- (c) disappear
- (d) uncover

問 4 段落[4]で、木が“the lungs of the earth”とたとえられているのはなぜか。その理由を 25 字程度の日本語で述べなさい。

問 5 段落[5]の deforestation の具体例を同じ段落から 二つ 選び、日本語で説明きなさい。

問 6 段落[6]の下線部の内容に意味がもっとも近いものを以下の選択肢から一つ選び、その記号を書きなさい。

- (a) It is equally essential to plant trees in an area the same size of a soccer field every five seconds.
- (b) It is the same as cutting down trees in an area as large as a soccer ground every five seconds.
- (c) We should remove a football ground-sized land in the Amazon forests every five seconds.
- (d) Soccer players can cut one tree every five seconds.

II 次の英文を読み、以下の設問に答えなさい。

Pain in the body may start in the mind

Good diagnosis takes persistent questioning and good analytical skills. It's a bit like a detective (unrelated / seemingly / piecing together / from / a puzzle) bits of information.

So argues Dr. Hillel Finestone, a rehabilitation^{*1} specialist who has treated countless numbers of patients complaining of pain-related problems, be it a backache or neck pain. The associate professor at the division of physical medicine and rehabilitation at the University of Ottawa says he needs to know about a patient's personal life in depth to really get to the bottom of the problems, and that includes information about family relationships or even a patient's sexual orientation.

(1)

Finestone, also director of stroke rehabilitation research at Elisabeth Bruyere Hospital in Ottawa, was in Japan late last month at the request of the faculty of rehabilitation medicine at Showa University School of Medicine, where he gave a talk to physicians and spent a day training resident doctors.

His message was simple and clear: Physical pain and emotional stress are inseparable, and therefore both doctors and patients need to pay more attention to emotional and social factors in dealing with pain-related issues.

[1]

In his 2009 book, "The Pain Detective: Every Ache Tells a Story," Finestone shares stories from his clinical experience. Written for laypeople,^{*2} the book explains the case of a 28-year-old female patient who was referred to him by her

family doctor because of a persisting pain in her chest and lower back area. The woman's X-rays showed some degenerative changes but the exact cause of her pain was unknown.

Finestone gets on the case like a detective, and asks her about everything from her marital status (divorced) and ages of her children (3 and 6) to whether she is on disability benefits.*³ The patient, named Ann in the book, initially sounds perplexed.*⁴

[2]

Finestone, however, explains that such information is important to "understand the pain story."

"If someone had, for instance, a child with Down syndrome. . . and was required to regularly bathe the child, even when the child was older, back pain could ensue or just not heal well once it had begun," he writes. "Similarly, marital status can explain some of life's tensions. For example, going through a divorce is potentially quite stressful,⁽²⁾ and stress can have a negative impact on the healing and recovery of injured back structures as well."

In fact, Finestone says, over the last decade, medical studies have shown that stress delays the healing of wounds.

"They sort of found it is pretty much due to the stress response," he says.

"When you are stressed, you have cortisol. Cortisol is a stress hormone, and it's a very important hormone if you are running away from a bear in the forest or you are crossing a street and a car is coming at you. But if you have that system going on for days it decreases your immunity."*⁵

But more communication with patients does not necessarily help fund doctors under the public-insurance scheme, which tends to reward prescriptions or procedures, not time spent on the patients.

⁽³⁾ Finestone, however, argues that arriving at a diagnosis through detailed questioning costs the medical system far less than automatically turning to expensive diagnostic procedures, such as MRIs or CT scans.

[3]

Not all doctors are personable and find it easy to ask personal questions. However, they do already ask questions on health-risk factors, such as “Do you have high blood pressure?” “Do you smoke?” and “Do you have high cholesterol?” Finestone believes they just need to approach stress in a similar systematic manner: “I want doctors and patients to start thinking about stress-related pain risk factors.”

出典：Tomoko Otake, “Pain in the body may start in the mind”, *The Japan Times*, April 11, 2014 (一部改変)

rehabilitation*¹=リハビリテーション

laypeople*²=専門家でない人

disability benefits*³=高度障害給付金

perplex*⁴=(人を)当惑させる

immunity*⁵=免疫(力)

問 1 第一段落の括弧内に与えられている語句を並べかえて文を完成しなさい。

問 2 文中の orientation の意味にもっとも近いものを以下の選択肢から一つ選び、その記号を書きなさい。
(1)

(a) guidance (b) introduction (c) location (d) preference

問 3 昭和大学医学部での Dr. Finestone の講義における単純明白な主張とは何か。70 字程度の日本語で説明しなさい。

問 4 文中の[1]—[2]—[3]にはそれぞれ以下の[A], [B], [C]いずれかの文章が入ります。以下の選択肢から正しい組合せを一つ選び、その記号を書きなさい。

[A] “If we integrate these psychological and social factors into our medical system a little better, and not make fun of it, I think we’ll avoid more tests, more needles and more procedures,” he says. “One of the reasons I came to Japan is to teach physicians and doctors in training how to do this.”

[B] “Canada is similar to Japan,” he tells *The Japan Times*. “In Canada, we are still looking more at the physical and not addressing mental and social issues affecting patients enough. We are trying to talk more about mental health. But we are not connecting it enough. I want to connect these emotions to our health and get people to think about it themselves — be their own pain detective.”

[C] “Well, to tell you the truth, I’m not really sure why I need to talk about my kids or marriage — after all, I’m here for my back pain,” she tells him.

[1]—[2]—[3]

- (a) A — B — C
- (b) B — A — C
- (c) B — C — A
- (d) C — A — B

問 5 文中の tension の意味にもっとも近いものを以下の選択肢から一つ選び、その記号を書きなさい。

- (a) joy (b) mood (c) risk (d) stress

問 6 心的ストレスと肉体的な不調を直接結び付ける物質は何か，文中に挙げられているものの中から最適なものを一つ英語で解答しなさい。

問 7 下線部(3)を日本語に訳しなさい。(MRI, CT は日本語訳せずに用いること。)

問 8 文中で挙げられている Dr. Finestone の考えを支持する客観的事実を二つ，日本語で簡潔に記載しなさい。

Ⅲ 身体的な痛みが心的ストレスに起因する，とする考えに賛同しますか，あるいは賛同しませんか。まず立場を明確にして，あなた自身の考えと根拠を 80～100 語程度の英語で書きなさい。