

東北大学 医学部
歯学部

平成 25 年度前期日程入学試験学力検査問題

平成 25 年 2 月 25 日

外 国 語 (英語)

志望学部	試験科目	試験時間
経済学部, 理学部, 医学部保健学科, 歯学部, 薬学部, 工学部, 農学部	英語	10:00~11:40 (100分)
文学部, 教育学部, 法学部, 医学部医学科	英語, ドイツ語, フランス語のうち から 1 科目選択	

- ・ドイツ語, フランス語の問題冊子は, 出願時に, それぞれの科目を希望した者に配付します。

注 意 事 項

1. 試験開始の合図があるまで, この問題冊子, 解答用紙を開いてはいけない。
2. この問題冊子は, 16 ページである。問題冊子の白紙のページや問題の余白は草案のために使用してよい。なお, ページの脱落, 印刷不鮮明の箇所などがあった場合には申し出ること。
3. 解答は, 必ず黒鉛筆(シャープペンシルも可)で記入し, ボールペン・万年筆などを使用してはいけない。
4. 解答用紙の受験記号番号欄(1枚につき2か所)には, 忘れずに受験票と同じ受験記号番号をはっきりと判読できるように記入すること。
5. 解答は, 必ず解答用紙の指定された箇所に記入すること。
6. 解答用紙を持ち帰ってはいけない。
7. 試験終了後, この問題冊子は持ち帰ること。

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I 次の英文を読み、下の問いに答えなさい。

For a species that has been around for less than 1% of 1% of the earth's 4.5 billion-year history, *Homo sapiens* has certainly put its stamp on the place. Humans have had a direct impact on more than three-quarters of the ice-free land on earth. Almost 90% of the world's plant activity now takes place in ecosystems where people play a significant role. We've stripped the original forests from much of North America and Europe and helped push tens of thousands of species into extinction. Even in the vast oceans, among the few areas of the planet uninhabited by humans, our presence has been felt thanks to overfishing and marine pollution. Through artificial fertilizers — which have dramatically increased food production and, with it, human population — we've transformed huge amounts of nitrogen from an inert gas in our atmosphere into an active ingredient in our soil, which has created massive aquatic dead zones in coastal areas. And all the CO₂ that the 7 billion-plus humans on earth emit is rapidly changing the climate — and altering the very nature of the planet.

Human activity now shapes the earth more than any other independent geologic or climatic factor. Our impact on the planet's surface and atmosphere has become so powerful that scientists are considering changing the way we measure geologic time. Right now we're officially living in the *Holocene epoch, a particularly pleasant period that started when the last ice age ended 12,000 years ago. But some scientists argue that we've broken into a new epoch that they call the Anthropocene: the age of man. "Human dominance of biological, chemical and geological processes on earth is already an undeniable reality," writes Paul Crutzen, the Nobel Prize-winning atmospheric chemist who first made the term *Anthropocene* popular. "It's no longer us against 'Nature.' Instead, it's we who decide what nature is and what it will be."

Humans have been changing the planet ever since the dawn of agriculture 10,000 years ago, when *Homo sapiens* began altering the land — and the plants

and animals growing on it — rather than simply living as hunters and gatherers. Agriculture enabled humans to increase and literally changed the face of the planet; today 38% of the earth's ice-free land has been cleared and cultivated for farming. But it wasn't until the dawn of the Industrial Revolution around 1800^(A) that human growth and its impact on the environment began to explode, and that's the moment when many scientists believe the age of man truly began.

Since then our species has ballooned from 1 billion to 7 billion, a rate of reproduction that biologist E. O. Wilson has characterized as “more bacterial than *primate.” Today the total human population is a hundred times as large as that of any other large animal species that has ever walked the earth. That growth has been aided by the use of fossil fuels as humans have learned to make use of coal, oil and natural gas, which has steadily warmed the atmosphere and further altered the planet.

After World War II we added nuclear power to the mix — making radioactive dust one more physical mark of our presence — and global population and economic expansion went too far. The change has been so rapid that scientists have named the past half century the Great Acceleration — and this period shows little sign of slowing as economic growth and improved health care extend the life spans and boost the resource use of billions of people in the developing world.

That's why the Anthropocene demands a dramatic change for environmentalism. Since the days of John Muir — the 19th century Scottish-American naturalist who founded the *Sierra Club — the goal of environmentalism has been the preservation of wilderness. Muir fought to create some of the U.S.'s first national parks, in Yosemite and the *sequoia forest, with the aim of protecting wild nature from human activity. People were seen as a threat to wilderness and to naturalness, and isolation was regarded as the solution.

By some measures, conservationists have succeeded. There are more than

100,000 protected areas around the world, compared with fewer than 10,000 in 1950, and approximately 13% of the planet's land has some form of legal protection. But we're still losing virgin forests in Africa, Asia and Latin America, while species are going extinct at a rate that is beginning to compare to the great sharp declines of the past. Nearly one-fifth of existing *vertebrate species are threatened, and if climate change continues at the current pace, that number will surely grow. In other words, conservationists may be winning the battle for protected areas and losing the war for wildlife.

The reality is that in the Anthropocene, there may simply be no room for nature, at least not nature as we've known and celebrated it — something separate from human beings — something pristine. For environmentalists, that will mean changing strategies, finding methods of conservation that are more people-friendly and that allow wildlife to coexist with human development. It means, if not embracing the human influence on the planet, at least accepting it.

(Adapted from an article by Bryan Walsh, *Time*, March 2012)

注 *Holocene 完新世(地質時代の区分の一つ, もっとも新しい時代)

*primate 霊長類の *Sierra Club 米国の環境保護団体

*sequoia セコイア杉 *vertebrate 脊椎動物の

問 1 Anthropocene という新たな時代区分名が提唱された理由を, 日本語で説明しなさい。

問 2 下線部(A)を日本語に訳しなさい。

問 3 下線部(B)を日本語に訳しなさい。

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II 次の英文を読み、下の問いに答えなさい。

With no television, no phones, relatively few books and burning heat, there was nothing much else to do in *Sudan but talk. We were there for a year. We were seventeen. And we had a lot to talk about. Family, books, girls, boys, politics, plans, ambitions, films, jokes — a life we hadn't lived yet. We didn't know much. But that didn't stop us talking.

The route that had taken me to Sudan at seventeen was strictly personal and completely random. I finished school a year early but felt quite exhausted. During my final year, chunks of my hair had fallen out and I had fainted once or twice. I needed to get off the conveyor belt and do something else. There was an organization that sent kids between school and university all over the developing world. I applied hoping I'd be sent to Zimbabwe. Along with fifteen others, however, I was sent to Sudan — a country and culture in which I didn't have the remotest interest — where I would teach people there English.

Notwithstanding a vicious attack of local diseases like malaria it was a
(a) tremendous year. I traveled through the desert on a camel and across the country on trucks full of onions, climbed a famous mountain with a black driver from New York and learned how to relax in a country where nothing happens fast. But for all the incredible things I was introduced to that year — the poverty, the plight of my refugee students, the challenge of teaching a class of forty students all older than me — the thing I learned most in that year was not about Sudan but about Britain, in general, and the British class system, in particular.

For while, during my time as a *Trotskyist, I had talked a lot about class struggle, I had never actually encountered class privilege. Now here it was. Of the sixteen of us who went to Sudan, eleven had been to *private school, one to *grammar school (which, until that point, I hadn't realized still existed) and four (including me) to *comprehensives. It was only on meeting the rest of the group

that I even became aware that I had been to a “comprehensive.” In my hometown, the word had never come up. When a fellow volunteer asked me what kind of school I attended I was surprised. “It was just school,” I said. “You know, normal school.”

In so far as I had thought about upper-class people at all up until then, I had really only imagined their wealth. But, up close, they didn’t strike you as particularly rich — at least, they didn’t have lots of cool stuff that I wanted and couldn’t afford. What was apparent, however, was their confidence: a social and intellectual self-assuredness I had not seen before. There was a bearing about them — a sense of entitlement — that left me astonished. On reflection, this is somewhat ironic. None of us was particularly inhibited. We wouldn’t have been in Sudan if we were, and yet I felt their confidence was backed by the kind of resources and cultural investment I would never have. It seemed as though they had been trained to talk about art, recognize literature, ski and know the difference between formal and informal in dress and conduct.

This was far more about me than it could ever have been about them. No one was ever unfriendly and very few were at all snobby. I’m sure some of them had never even been skiing and, over a year of constant talk, we would all become close friends.

But being around them made me feel not just less sophisticated but positively unsophisticated. My school life had been quite utilitarian. I read for my exams. I read things that might be useful for my exams. But I never really read for pleasure. I played tuba in an orchestra, but I was never into classical music. As the year went on, I began to feel like an uneducated person who had mastered the art of passing exams. Feeling my ignorance keenly, I went through various emotional stages: respect, resentment, envy and self-hatred and, finally, indifference.

By the end of the year, two things had occurred to me. The first was that these people were no smarter than me or indeed many of the people at my

school. They had been better prepared for middle-class life and had more grace. But for everything I didn't know and they did, there were just as many things I knew and they didn't. The fact that it wasn't in their canon ^(e) didn't mean it didn't count. And I didn't fancy their canon much anyway. Moreover, for all their culture and customs, they were, in many ways, quite parochial. ^(f) Outside academic matters, some of the things they didn't know shocked me. I remember explaining to one of them that many British people could not afford to go on holiday every year. A few of them simply couldn't — or wouldn't — believe it.

I ended the year feeling that, despite the fact that my family had little money or status, I had a freedom that many of my fellow volunteers did not. Indeed it was precisely because of their status that they did not have the freedom I did. They seemed like prisoners of their own wealth and class. Some referred to this year abroad as though it were their one chance to do something exciting before taking up a routine of predictable if privileged work — as though this one opportunity to exert their own free will would soon be over and the return to their own society inescapable. I had no idea where I was going with my life.

During one conversation about what would most upset our parents, one of the girls said, without any sense of embarrassment, "I know that my mother would be really disappointed if I didn't marry someone who was a similar class, and the same religion and race. It would just be really tough on her and I wouldn't want to do that to her. I don't think it would be fair."

At first I was deeply offended and upset. I was not even remotely attracted to her but, as the only black and working-class male in the room, I felt oddly invisible — as though my presence as an emotionally sensitive being were insignificant. But I quickly realized how much sadder it was for her. Here she was, still in her teens, having this terrific foreign experience and yet, all the while, preparing herself for a life of refined imprisonment.

I would later realize that the notion that identity is a refuge for the poor and

needy — a means of guarding the special interests of those who cannot support themselves — is entirely wrong. Those most wedded to preserving their identity — indeed, handcuffed to it — are often powerful. When all is said and done, they have the most to lose. They just don't refer to it as identity. They call it tradition, heritage or, simply, history.

(Adapted from Gary Younge, *Who Are We?*)

注：*Sudan スーダン(アフリカ北東部に位置する)

*Trotskyist ロシアの革命家トロツキーの信奉者

*private school 私立の中等教育機関

*grammar school 特権階級の子弟が多く通う伝統的な中等教育機関

*comprehensives 学区制に基づく公立中等教育機関

問 1 筆者は、スーダンでの生活を通して、何度か心境の変化を重ねています。その過程を順を追って、日本語で説明しなさい。

問 2 もしもあなたが、本文冒頭から三段落目最後までに述べられている筆者の立場であったならば、スーダンに行きますか、それとも行きませんか。具体的に理由をあげて英語で述べなさい。

問 3 下線部(a)~(f)の本文中における意味について、もっとも適切なものを、それぞれ与えられた選択肢から選び、記号で答えなさい。

- (a) notwithstanding (イ) in spite of
(ロ) because of
(ハ) for fear of

- (b) a bearing
- (1) the way people behave or conduct themselves
 - (2) a part of a machine that allows one part to rotate or move in contact with another part
 - (3) the position of something relative to a fixed point
- (c) resources
- (1) minerals
 - (2) knowledge
 - (3) origin
- (d) utilitarian
- (1) giving or designed to give pleasure through beauty
 - (2) affirming and implying the existence of a thing
 - (3) designed to be useful or practical rather than attractive
- (e) canon
- (1) a piece in which the same melody is begun in different parts successively
 - (2) a general law, rule, or principle by which something is judged
 - (3) a member of the clergy who is on the staff of a cathedral
- (f) parochial
- (1) having limited knowledge
 - (2) having lots of attractive features
 - (3) being away from home

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Ⅲ 次の英文は、メコン川の水力発電利用に関する討論会の冒頭部分です。司会者の発言に続き4名の発表者(A, B, C, D)が各自の意見を述べています。これを読み、下の問いに答えなさい。

Chair: Welcome to our forum on the hydropower developments of the Mekong River today. Today we will discuss issues of the Mekong River in Cambodia which runs about 500 kilometers and is up to 5 kilometers wide in some areas. Cambodia has a shortfall of electricity with only 20 percent of households having this resource, most of them in the capital city of Phnom Penh. Some people argue that it is necessary to build more hydroelectric dams on the Mekong and some of the smaller rivers flowing into the Mekong. The Mekong River is shared among many countries and further development of hydroelectric dams in Cambodia poses not only a threat to certain groups of people in Cambodia, but also a further threat to Vietnam.

A: I am concerned about the environmental effects in Cambodia specifically. If the Mekong River is dammed up, there will be many catastrophic implications. First, migratory patterns of fish and mammals along the Mekong River will be disrupted. For example, the freshwater Irrawaddy dolphin which is already designated as an endangered species is shrinking in number. It only exists in certain small areas of the Mekong River in Cambodia, Laos, Bangladesh and Myanmar. These mammals live in fresh water mostly even though they can also live at sea in salt water. There used to be up to 100 freshwater dolphins between Kratie and the Lao border, but now there are less than 70 of the species which are still surviving. Most of the species were killed off by hunting for their oils when they were slaughtered in the late 1970s. The development of dams altering the migratory patterns of the dolphins is a further threat to their survival.

B: Yes, I believe you are correct. Likewise the Tonle Sap, the largest freshwater lake in Southeast Asia, is an ideal habitat for many birds, snakes, and turtles and is one of the most plentiful areas for freshwater fish. The overflow from the Mekong River is what makes up to 20 percent of this freshwater lake. The building of dams will seriously affect migratory patterns of these animals. In 2001, this area was declared as a *UNESCO Biosphere Reserve, but this has not hindered construction of dams further upstream and has also caused serious deforestation.

C: I understand your concerns, but we need electricity and the only affordable source of this is hydropower. We need more hydropower to continue industrial growth of the country. There is a shortage of electricity to run many new factories that provide employment for the growing population of Cambodia. The current development of two new dams combined will provide more than 3,300 megawatts of power for industrial development that is greatly needed. Hence, the environmental concerns must become secondary.

D: But it is not only the wildlife that suffers from the development of hydropower on the Mekong. The annual flooding of the river makes the soil fertile and it is necessary to grow abundant crops that provide food for the growing population. Further dams will have a disastrous effect for Cambodian farmers.

注：*migratory 回遊の

*UNESCO Biosphere Reserve ユネスコ環境保護区域

問 ここで論じられているダム建設の(1)推進派、および(2)反対派の意見を英語で簡潔に述べなさい。

IV 次の文章を読み、下線部(A)、(B)を英語に訳しなさい。

インターネットで欲しい情報はすぐにどこにいても手に入る。二百年以上もの歴史を持つ有名な英国の百科事典が、もう新版を出さなくなったのもインターネットの時代になったからだと聞いている。^(A)

そこから出てくる一つの結論は、書物の時代が終ったのではないかという^{きぐ}危惧である。報道などでも盛んに流布され、活字文化の未来予測は相当暗いと騒がれている。

情報はインターネットでよいのに、なぜ、私は書物をこれほど買うのか。どうして高価な古書まで買うのか。それは書物から得るものが単に情報だけではないからだ。書物はインターネット上の情報が与えることのできない「楽しさ」を与えてくれるのである。^(B)それは古い^{そうてい}装幀や世紀を隔てた匂いなどなど……。

インターネットの情報と、読書から得る知識とは本質的に違うのではないだろうか。その違いを^{ひゆ}比喩で表現したら、食物とサプリメントの関係になるのではないだろうか。

(渡部昇一『知的余生の方法』より一部変更)