

奈良県立医科大学 後期

平成 31 年 度

試 験 問 題

英 語

【注 意】

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ならない。
2. 監督者の指示に従って、すべての解答用紙の受験番号欄に受験番号を記入せよ。
3. 問題冊子は表紙のほか 8 ページ、解答用紙は 4 枚である。
4. 問題冊子の印刷不鮮明、ページの落丁・乱丁及び解答用紙の汚れ等に気付いた場合には、手を挙げて監督者に知らせよ。
5. 解答はすべて解答用紙の対応する場所に記入せよ。
6. 解答用紙は切り離してはならない。
7. 解答用紙は持ち帰ってはならない。問題冊子は持ち帰ってよい。

I. 次の英文を読んで、設問に答えよ。(*印の語には注がある。)(60点)

How do you cause people to believe in an imagined order such as Christianity, democracy or capitalism*? First, you never admit that the order is imagined. (1)You always insist that the order sustaining society is an objective reality created by the great gods or by the laws of nature. People are unequal, not because Hammurabi* said so, but because Enlil* and Marduk* declared it. People are equal, not because Thomas Jefferson said so, but because God created them that way. Free markets are the best economic system, not because Adam Smith said so, but because these are the unchangeable laws of nature.

You also educate people thoroughly. From the moment they are born, you constantly remind them of the principles of (2)the imagined order, which are included in anything and everything. They are included in fairy tales, dramas, paintings, songs, etiquette, political propaganda, architecture, recipes and fashions. For example, today people believe in equality, so it's fashionable for rich kids to wear jeans, which were originally working-class clothing. In the Middle Ages people believed in class divisions*, so no young nobleman* would have worn peasant's* clothing. Back then, to be called 'Sir' or 'Madam' was a rare privilege reserved for the noblemen, and often purchased with blood. Today all polite correspondence, regardless of the receiver's social status, begins with 'Dear Sir or Madam'.

The imagined order is set in the material world. Though the imagined order exists only in our minds, it can be included in the material reality around us. Most Westerners today believe in individualism. They believe that every human is an individual, whose worth does not depend on what other people think of him or her. Each of us has within ourselves a brilliant ray of light that gives value and meaning to our lives. In modern Western schools teachers and parents tell children that if their classmates make fun of them, they should ignore it. Only they themselves, not others, know their true worth.

In modern architecture, this myth* leaps out of the imagination to take physical shape. The ideal modern house is divided into many small rooms so that each child can

have a private space, hidden from view, providing maximum independence. This private room almost always has a door, and in many households it is accepted practice for the child to close, and perhaps lock, the door. Even parents are forbidden from entering without knocking and asking permission. The room is decorated as the child sees fit, with rock-star posters on the wall and dirty socks on the floor. (3) People growing up in such a space cannot help but imagine themselves as 'an individual', their true worth coming from inside themselves rather than from outside.

Medieval noblemen did not believe in individualism. Someone's worth was determined by their place in the social order, and by what other people said about them. Being laughed at was a terrible shame. Noblemen taught their children to protect their good name whatever the cost. Like modern individualism, the medieval value system took shape in the stone of medieval castles. The castle rarely contained private rooms for children (or anyone else, for that matter). The teenage son of a medieval baron* did not have a private room on the castle's second floor, with posters of Richard the Lionheart* and King Arthur* on the walls and a locked door that his parents were not allowed to open. He slept alongside many other youths in a large hall. He was always on display and always had to take into account what others saw and said. (4) そのような環境で生育した人は、当然のことながら、人間の本当の価値は社会の上下関係における自分の位置によって、そして、他人が自分のことをどのように評価するかによって決まるものだと考えた。

注

capitalism* 資本主義

Hammurabi* ハンムラビ [バビロニア第一王朝第6代の王(1792-50 B.C.頃); ハンムラビ法典を制定]

Enlil* エンリル [シュメールの諸神の王とみなされた]

Marduk* マルドウック [古代バビロニアの主神]

class divisions* 社会の階級区分

young nobleman* 貴族の子弟

peasant's* 百姓の

myth* 神話

baron* 男爵 [貴族の一位階]

Richard the Lionheart* リチャード1世 [イングランド王; 1189-99]

King Arthur* アーサー王 [英国の伝説的な王]

設問

1. 下線部 (1) を和訳せよ。(10点)
2. 下線部 (2) の “the imagined order” はどのようなことを指すのか、また、なぜそのように呼ばれているのか、この記事の中で用いられている具体例を利用して、日本語で答えよ。(20点)
3. 下線部 (3) の意味を “such a space”, “individual”, “inside”, “outside” が指す内容を明らかにして、日本語で説明せよ。(15点)
4. 下線部 (4) を英訳せよ。(15点)

[空白ページ]

問IIは次のページから始まります。

II. 次の英文を読んで、設問に答えよ。(*印の語には注がある。)(75点)

Today, scientists have identified over 7,000 Mendelian diseases*. While many are discovered with medical checks of children and adults, a new study suggests that many disorders do not get detected.

With a database of electronic health records and DNA samples, a team of scientists found that 3.7 percent of patients in a hospital system carried a genetic variant* linked to a disease. It's possible that as many as 4.5 percent of cases of apparently non-genetic diseases are the result of such mutations*. The study suggests that it may be possible to detect more of these hidden disorders with a computer program that indicates suspicious symptoms in groups of patients. That would be a big step forward for patients (1)coping with unexplained diseases.

The study, published Thursday in Science, represents the first large-scale use of electronic health records to search for hidden Mendelian diseases. But Dr. Joshua C. Denny, a biomedical informatics* researcher at the Vanderbilt University School of Medicine and co-author of the new study, suspected that (2)it only revealed the tip of a genetic iceberg*. Much larger databases including DNA information and records for hundreds of thousands of people are being built, and searching them may uncover many more hidden mutations. Dr. Denny and his colleagues gathered data from Vanderbilt's electronic health records system, which has more than two million patients. More than 225,000 have volunteered for genetic research, allowing scientists to analyze their DNA. The researchers picked out 21,701 patients from the database and looked closely at all the symptoms recorded for each one. They then compared the symptoms to those seen in 1,204 Mendelian diseases.

(3)It was a difficult task. These disorders can produce a number of symptoms, and each patient may have a different combination of them. Some symptoms linked to a Mendelian disease may also be signs of other diseases. Cystic fibrosis* can cause asthma* and repeated infections, for instance — but those symptoms alone aren't enough to diagnose* the disease. Dr. Denny and his colleagues developed a scoring

system to determine how likely it was that each patient in their study suffered from each Mendelian disease. The researchers identified groups of people with symptoms suggesting they shared a Mendelian disease. The researchers went on to examine the DNA of these patients to see if they also shared a mutation. The team found 807 patients carrying mutations in genes* linked to 17 diseases, such as cystic fibrosis or hemochromatosis* which causes iron to build up in the blood. Only eight of these patients had a test that revealed the mutation. (4)In other cases, doctors had tested for the wrong disease. Many times, the doctors hadn't ordered any genetic tests.

Typically, these disorders can be passed down in one of two ways. A dominant disease*, like Huntington's*, requires the person to inherit just one defective* copy of a gene from a parent. Recessive diseases*, such as sickle cell anemia*, usually require two defective copies of the same gene. However, the mutations that the scientists discovered often didn't fit the standard profile for the diseases. Many of the patients had conditions that are considered recessive, yet they carried just a single defective copy of the gene. Dr. Denny suspects that a single defective copy may cause milder versions of Mendelian diseases. He states, "The researchers identified 36 people, for example, who carried only one defective version of a gene called AGXT. Two copies of the gene cause a disease known as primary hyperoxaluria*, which can result in kidney failure in infants. The patients identified in the new study also suffered kidney problems — but not in the first few years of life." (5)調査がかなり小規模であったことを考慮すると、これらの結果は一層驚くべきものだ。Dr. Denny は比較的少数のヨーロッパ系血統の人々における限定数の変異のみを調べたのであった。(Much of what is known about gene variants that cause disease was discovered by researching mainly white populations.)

注

Mendelian diseases 遺伝病

genetic variant* 変異遺伝子

mutations* 突然変異種

biomedical informatics* (コンピューターを使用する) 生物医学情報科学

iceberg* 冰山

cystic fibrosis* 嚢胞性線維症 (遺伝病の一つで呼吸器系疾患を引き起こす)

asthma* 喘息

diagnose* 診断する, 病気を特定する

genes* 遺伝子

hemochromatosis* 血鉄症 (肝臓や脾臓などに鉄が滞留する鉄過剰症の一種)

dominant disease* 優性遺伝病

Huntington's* ハンチントン病 (大脳神経細胞が変性する遺伝性疾患)

defective* 欠陥をもつ

recessive diseases* 劣性遺伝病

sickle cell anemia* 鎌形赤血球性貧血

primary hyperoxaluria* 原発性高シュウ酸尿症 (シュウ酸カルシウムが腎臓などに沈着する遺伝性疾患)

設問

1. 下線部 (1) の具体的内容を日本語で記せ. (10 点)
2. 下線部 (2) について, "it" が指すものを明らかにして, 具体的な意味を文脈に即して日本語で記せ. (15 点)
3. 下線部 (3) について, "it" が指すものを明らかにして, なぜ「困難な仕事」になったのか, その理由を日本語で記せ. (20 点)
4. 下線部 (4) の事態が生じた理由を, 本文の記述内容から推測して, 日本語で記せ. (15 点)
5. 下線部 (5) を英訳せよ. (15 点)

III. The article suggests that many Mendelian diseases go undetected. Write approximately 120 words in English arguing for or against collecting DNA samples from all newborn babies in Japan. This task will be marked on both content and the accuracy of the English language used.

(別紙解答用紙Ⅲの様式にしたがって論述せよ。) (60 点)

IV. Write approximately 80 words in English about a situation where you helped someone. This task will be marked on both content and the accuracy of the English language used. (30 点)