

注意：解答用紙は2枚あります。それぞれに学籍番号と氏名を記入してください。

### 問題1

次の文章は、ある医師が行った研究に関する記事で、6つのパラグラフから構成されている。この英文に関する以下の問に答えなさい。  
なお、下線の付いた部分は固有名詞あるいは特殊な語であるので、解答の際には原文のまま記載してよい。それ以外に未知の語がある場合には、前後からその意味を推測すること。(注：下記の文中での the South はアメリカ南部を意味する。)

Joseph Goldberger was a doctor for the United States Public Health Service. In nineteen twelve, he began to study a skin disease that was killing thousands of people in the South. The disease was pellagra.

Doctor Goldberger traveled to the state of Mississippi where many people suffered from pellagra. He studied the victims and their families. Most of the people were poor. The doctor came to believe that the disease was not infectious, but instead related to diet.

He received permission from the state governor to test this idea at a prison. Prisoners were offered pardons if they took part. One group of prisoners received their usual foods, mostly corn products. A second group ate meat, fresh vegetables and milk. Members of the first group developed pellagra. The second group did not.

But some medical researchers refused to accept that a poor diet caused pellagra. For the South, pellagra was more than simply a medical problem. There were other issues involved, including Southern pride.

So Doctor Goldberger had himself injected with blood from a person with pellagra. He also took liquid from the nose and throat of a pellagra patient and put them into his own nose and throat. He even swallowed pills that contained skin from pellagra patients. An assistant also took part in the experiments. So did Doctor Goldberger's wife. None of them got sick.

Later, the doctor discovered that a small amount of dried brewer's yeast each day could prevent pellagra. Joseph Goldberger died of cancer in nineteen twenty-nine. He was fifty-five years old. Several years later, researchers discovered the exact cause of pellagra: a lack of the B vitamin known as niacin.

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- (1) pellagra とは何か、第1パラグラフに則して答えなさい。(直訳でなくてよいが、原文の内容を不足なく書くこと。以下も同様。)
- (2) Goldberger 医師は pellagra の原因は何にあると考えたか、第2パラグラフに則して答えなさい。
- (3) Goldberger 医師が最初に行った実験とその結果について、第3パラグラフに則して説明しなさい。
- (4) 一部の研究者たちが Goldberger 医師の最初の実験結果を受け入れなかったのはなぜか、第4パラグラフに則して説明しなさい。
- (5) Goldberger 医師が次に行った実験とその結果について、第5パラグラフに則して説明しなさい。
- (6) Goldberger 医師の死後に分かった pellagra の真の原因とは何か、第6パラグラフに則して答えなさい。

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**問題2**

Answer the following questions in English using more than 50 but less than 100 words for each question.

(1) Describe your research activities.

(2) What kind of practical use is expected when your research is completed ?

(3) How is your research related with the important challenges in this century (Global warming, Food crisis, Population explosion, Energy depletion, Digital divide, etc.) ? If you cannot answer the question, you may describe one of these challenges.