

大沼研究会 ミクロ経済学入ゼミ試験 (2013.3.2)

以下の問に答えなさい。

1. 生産における短期と長期の違いについて簡単に説明しなさい。(20点)

2. 第1財と第2財の消費量 x_1 および x_2 にもとづく効用関数 $u(x_1, x_2)$ が、

$$u(x_1, x_2) = x_1 + \log(x_1 + x_2)$$

と表されるとする。このとき、次の問題に答えなさい。(50点)

- (1) 第1財および第2財の限界効用をそれぞれ求めなさい。
- (2) 第1財に対する第2財の限界代替率を導出しなさい。
- (3) 第1財の価格を p_1 、第2財の価格を p_2 、所得を m とするときの、第1財と第2財の最適購入量を、 p_1, p_2, m を用いて表しなさい。ただし、

$$\frac{p_1(p_1 - p_2)}{p_2} > m > p_1 - p_2 > 0$$

とする。

- (4) 第1財と第2財は、それぞれ正常財か、あるいは下級財か判別しなさい。

3. Aさんの資産 y による効用関数が $U(y) = \sqrt{y}$ と表されるものとする。今、Aさんは資産を10,000だけ保有している。一方、Aさんは、10%の確率である病気にかかる可能性があり、かかった場合の損害額は10,000であるものとする。しかし、ある保険に加入すれば、病気になった場合、損害額がすべてカバーされる。(30点)

- (1) 保険に入らない場合の、Aさんの期待効用を求めなさい。
- (2) 保険の価格が最大限いくらまでだったら、Aさんは、この保険に加入しようとするか、求めなさい。

2013年度大沼研究会英語試験問題

次の文は、2011年12月30日に、イギリスのThe Guardian紙オンライン版に掲載された、ヤスニ・プロジェクトについての記事である。これを読んで、以下の問に答えなさい。

An alliance of European local authorities, national governments, US film stars, Japanese shops, soft drink companies and Russian foundations have stepped in to prevent oil companies exploiting 900m barrels of crude oil from one of the world's most biologically rich tracts of land. According to the UN, the "crowdfunding" initiative had last night raised \$116m (£75m), enough to temporarily halt the exploitation of the 722 square miles of "core" Amazonian rainforest known as Yasuni national park in Ecuador.

The park, which is home to two tribes of uncontacted Indians, is thought to have more mammal, bird, amphibian and plant species than any other spot on earth. Development of the oilfield, which was planned to take place immediately if the money had not been raised, would have inevitably led to ecological devastation and the eventual release of over 400m tonnes of CO₂.

Ecuador agreed to halt plans to mine the oilfield if it could raise 50% of the \$7.6bn revenue being lost by not mining the oil. While the world's leading conservation groups pledged nothing, regional governments in France and Belgium offered millions of dollars – with \$2m alone from the Belgian region of Wallonia. A New York investment banker donated her annual salary and Bo Derek, Leonardo DiCaprio, Edward Norton and Al Gore all contributed.

The idea of asking people to pay for something not to take place was widely dismissed by national treasuries as holding the world to ransom. The German development minister, Dirk Niebel, said that the principle of paying for the oil not to be exploited "would be setting a precedent with unforeseeable referrals". However, Germany has now contributed \$48m in "technical assistance". The former Italian prime minister Silvio Berlusconi was widely criticised after he wrote off \$51m of Ecuador's \$10bn external debt as Italy's contribution. Other governments pledging support were Chile,

Colombia, Georgia and Turkey (\$100,000 each), Peru (\$300,000), Australia (\$500,000) and Spain (\$1.4m).

Supporters of the scheme argued that it could be a model for change in the way the world pays to protect important places. The money raised is guaranteed to be used only for nature protection and renewable energy projects. Nigeria, Cameroon, Gabon and other countries with oil reserves, have investigated the possibility of setting up similar schemes as an alternative to traditional aid. The biological richness of Yasuni has astonished scientists. One 6sq km patch of the park was found to have 47 amphibian and reptile species, 550 bird, 200 mammal and more species of bats and insects than anywhere in the western hemisphere. According to Ecuadorean scientists, it would take in the region of 400 years to record Yasuni's 100,000 or more insect and 2,000 fish species. Of the 63.4% of Ecuadoreans polled last month who knew of the Yasuni initiative, 83.4% supported it.

1. あなたが何も知らない友人に、このヤスニ・プロジェクトの内容を教えることを想定して、このプロジェクトを説明しなさい。ただし、下線部の内容は、説明に含めなくてもよい。
2. 下線部を日本語に訳しなさい。