

平成17年度

大学院生命環境科学研究科8月期入学試験

地球環境科学専攻

外国語：英語

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注意

- * 指示があるまで問題冊子を開いてはならない。
- * 設問ごとにそれぞれ別の答案用紙を用いること。
- * 設問ごとにそれぞれ1枚の答案用紙を用いること。

英文和訳 問題 [1]

次の文章を和訳せよ。 Translate the whole sentences into Japanese.

Graduate student enrollment in science and engineering (S&E) programs across the United States reached a record high in the fall of 2002, according to a new report from the National Science Foundation. The 6.1% increase, to 455,000, is driven by rising numbers of U.S. citizens, permanent residents, and foreign students already in the country and comes despite a 6% drop in the number of first-time foreign students. The increase in domestic enrollment is most likely a reflection of the economic downturn that began in late 2000. When the job market hits rock bottom, it's not surprising to find more people entering graduate school to make themselves more marketable or to be in a holding pattern.

Even though the numbers look promising, domestic enrollment is still some 6% below a peak of 330,000 reached in 1993. To ensure that the upward trend continues, we need a sustained effort to attract more domestic talent to S&E.

Along with the encouraging outlook, the report strikes a sobering note by tying the drop in first-time, foreign-student graduate enrollment to the impact of the 11 September 2001 terrorist strikes. Changes in visa processing after 9/11 may have contributed to the decline.

Now that more domestic students are enrolled, it's important to keep them in the science pipeline. It's necessary to ensure that these enrollments translate into completed degrees and lead to sustainable careers.

sober 控えめな, 冷静な

(*Science* の記事より抜粋)

英文和訳 問題 [2]

次の英文において、著者は、環境の将来予測が不確実である理由を列挙し説明している。それを日本語の箇条書きで記しなさい。

The debate about the relative power of human and natural influences is but one of many components of environmental uncertainty. In almost all attempts to predict the future major uncertainties arise. One can provide various explanations for this. First, environmental change is the result of very complex interactions between several closely coupled non-linear systems. The complexity creates problems for both modelling and comprehension, while the non-linearity means that the dimensions of a response are not by any means necessarily directly proportional to the size of the stimulus that promotes change. Secondly, prediction of environmental change depends on models and many models are imperfect because of the gross assumptions they employ. Thirdly, nature always has surprises in store (e.g. various types of extreme event or catastrophe) and these will not cease in the future. They may work to counteract or increase the consequences of various human actions. Fourthly, there are bound to be factors that we have ignored, which turn out to be highly important. For example, who several decades ago could have predicted the role of CFCs in creating the ozone hole? Fifthly, identification of future trends requires some knowledge of background or natural levels. Often we lack the necessary long-term data to enable us to ascertain whether observed trends have happened before and whether they are or are not cyclical. Sixthly, some key issues are less easy to predict than others and therefore preclude accurate prediction of phenomena that depend on them. For example, without a clear idea of precipitation patterns in a warmer world it is well nigh impossible to predict the response of rivers and biota. Seventh, we may often be able to predict that change will probably occur, but we find it much less easy to predict the speed of response. Ice caps and glaciers may well melt in a warmer world, but how fast? Finally, there are problems of definitions. Without clear definitions of phenomena, measurement is difficult, 'results' can be meaningless and trends or changes difficult to identify. We find it difficult to define such phenomena as desertification and deforestation.

(Goudie, A. S. 1993. *The Human Impact on the Natural Environment*. による)

linear 線形の

preclude 妨げる

nigh ほぼ

biota 生物相 (fauna と floraを合わせたものに相当する)

和文英訳 問題 [1]

次の日本語を英文に訳しなさい。

環境科学は、環境問題の解決という必要に迫られ創られた学問分野である。その点、純粋科学とは異なる。環境問題とは、人間活動がもたらした種々の産物により、地球上の様々な変動が、自然現象による変動範囲を超えたことにより生じたものである。したがって、環境問題を解決する究極の手段は、人間活動により生ずる地球上の変動を、自然現象の変動範囲に戻すことである。

和文英訳 問題 [2]

次の日本語を英文に訳しなさい。

農業は、自然環境と密接に関係している。多くの場合、農業地域の地図は、環境による影響に対する適応を反映したものとなっている。気候は、異なった形態の農業に対しておそらく最も大きな影響を及ぼす。たとえば、熱帯と亜熱帯以外の地域では、霜に弱い作物の耕作には法外なコストがかかる。また一般的に、農民は丘陵や森林に覆われた山地を避け、平地で栽培を行う傾向にある。アメリカ合衆国では、商業的な小麦の栽培は、最も平坦な地域に集中している。