

平成18年度 大学院理学系研究科博士課程（生物科学専攻）
秋募集 入学試験問題

外国語

試験時間： 10:30～12:00

配点： 150点

注意：

- (1) 問題 から問題 に解答しなさい。
- (2) 解答用紙は4枚あります。問題ごとに、各々1枚の解答用紙を使用しなさい。
- (3) それぞれの解答用紙に、問題 から問題 の問題番号、受験番号、氏名を記入しなさい。
- (4) 解答用紙に表面で書ききれない場合には、裏面の線より下を使用しなさい。
- (5) 配布された解答用紙は、4枚とも提出しなさい。

問題 . 次の問1と問2の英文を和訳しなさい .

問1 .

I have been asked hundreds of times over the past ten years why I wrote this book. It wasn't because there aren't other perfectly acceptable biological science textbooks out there, and it wasn't because I would get rich. I wrote this book because I love writing. I get great pleasure and satisfaction from taking a complicated subject, turning it around until I see it clearly from a new angle, and then explaining it in simple words. I write to explain biological science to students today the way I wish it had been explained to me years ago.

問2 .

We know today that the actual basis for the equivalence of heat and dynamical energy is to be sought in the kinetic interpretation, which reduces all thermal phenomena to the disordered motions of atoms and molecules. From this point of view, the study of heat must be considered as a special branch of mechanics: the mechanics of ensemble of such an enormous number of particles (atoms or molecules) that the detailed description of the state and the motion loses importance and only average properties of large number of particles are to be considered.

問題 . 次の文章を日本語に抄訳しなさい . 各段落ごとに , 3行から4行にまとめなさい . 地名や人名 , 組織名については , 翻訳しなくてもよい .

People like living near the sea. From early human settlements to many of today's great cities, proximity to the oceans and estuaries of the world has brought advantages such as trade, transport, and easy access to marine resources. Coastal areas have also long been favorite holiday destinations, with resorts and homes with sea views lining beaches and cliffs everywhere.

However, people living along coasts will be among the first to be affected by the rising sea levels and increasingly frequent severe storms that are predicted consequences of global climate change. Although no definite link exists between global warming and the trio of hurricanes that caused so much destruction and loss of life in the Caribbean and southern US this year, they are a portent of things to come.

(文章は次ページに続く)

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Even the most skeptical governments now recognize, albeit reluctantly, that global climate change is real, and that it is no longer a question of if, but of when, and how much. Large, wealthy countries have already begun to plan for these contingencies. They have the luxury of being able to build at higher elevations, of moving populations away from high-risk areas, and of diverting huge sums of money and manpower to disaster relief and the rebuilding of ravaged areas. Small island nations are generally not so fortunate. Many are low-lying or have uninhabitable interiors, so that the people, infrastructure, and agriculture are concentrated in coastal zones. This, combined with the tendency of small islands to be economically and ecologically fragile, makes them particularly vulnerable to the effects of global climate change.

In January 2005, small island nations will join with donor and other countries at a meeting in Mauritius, to discuss the many challenges they face. A key item on the agenda will be climate change. An alliance of 43 small island developing states (SIDS), created prior to the 1992 Earth Summit in Rio, persuaded the United Nations to call a Global Conference on the Sustainable Development of Small Island Developing States, in Barbados in 1994. Now, 10 years later, an international meeting will review the implementation of the Barbados Program of action.

There will undoubtedly be calls for developed nations to renew their pledges of financial assistance since, according to a recent report by UN Secretary-General Kofi Annan, foreign aid represented only 1% of small islands' gross national income in 2002, compared to 2.6% in 1990. But help is also needed in advance planning and coastal management, as well as advice on the cheapest, most effective methods for preventing coastal erosion - not the large-scale, large-investment infrastructure projects that a developed country would use, but simple, affordable measures such as maintaining sufficient space between houses and the shoreline, and preserving wetlands, mangroves, and other natural buffers against storms. The international community should provide the financial and technical resources to help these at-risk nations develop and implement the response strategies they will need to protect themselves as much as possible from the impacts of climate change.

出典 (一部省略・改変): "Islands in the storm" by Dr Sue Silver (Editor-in-Chief) *Frontiers in the Ecology and Environment*, 9 (2) (2004)

問題 . 以下の英文を読み，問 1 から問 3 に答えなさい。

The purpose of this chapter is to help scientists make effective choices by (1) out some principles of good visual communication and by (2) examples of good and bad choices.

It is now possible (3) a cardiologist (4) transfer a digitally produced echocardiograph into a photo manipulation program where labels may be changed or deleted, a title may be added, selective parts of the echo may be chosen, the image may be enlarged or reduced, and color may be added. Directly from the screen, the image may be made into a slide or a printed page or saved to a disk, which may be sent away for publication.

Thus the possibilities for data handling by computer are marvelous and fascinating. The resulting choices presented seem endless and are often confusing. It becomes hard to remember that the point of these choices is to inform as clearly, quickly, and easily as possible.

Presented with such an array of tools and choices, it is easy to make the wrong choice, which sends an unintended message or obscures information.

In a complex figure* described here, it is difficult (5) know what is (6). The eye is drawn first to the shadowed boxed (7). Thus bold large (8) and thick axis (9) draw attention from the (10).

To communicate well visually, the scientist must first know what aspect of findings he or she wants to convey. Then the manner of conveying that aspect must be visually accurate and carefully considered and planned.

cardiologist 心臓(病)学者, echocardiograph エコー心臓検査

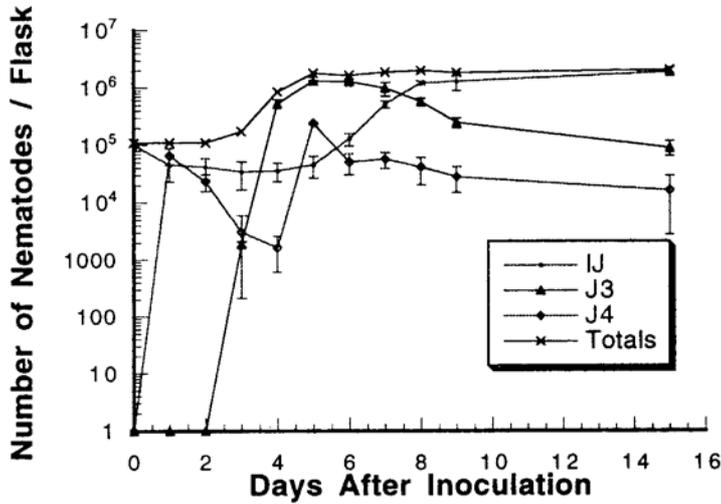
*は次ページに示されている図

問 1 文章中の空欄 (1) から (10) に 1 つの単語を加えると文章が完成する。(1)から(10)について適当な単語を解答しなさい。

問 2 下線部 , および を和訳しなさい。

問 3 この文章を書いた著者の考え方に基づけば，次ページに示されている図はどのように書き改められるのが良いと考えられるか．数行の英文で簡潔に答えなさい。

OBSCURE INFORMATION



In this figure, four sets of data are plotted from an *in vitro* culture inoculated with infective juvenile (IJ) nematodes. The figure purports to show population changes in three stages of development from IJ to 4th- or 3rd-stage juveniles (J3 and J4). Instead it is a visual thicket of tangled information. It is so cluttered with information that the development pathways are meaningless.

問題 .

問1 . 次の和文を英文に訳しなさい .

「科学とは何を意味しているのか .」これは , この本を読もうとする時に当然おこる疑問である . しかし , この質問は答えられるにしても , はじめに答えることはほとんど不可能である .

問2 . 以下の紹介状を英文に訳しなさい .

ABC 大学
人間社会学部
教授 難波次郎

今貴方を見つめている真剣な顔をした青年は , 中百舌鳥太郎という将来有望な本学の教員です . 中百舌鳥君はこのたび貴大学で一年間すごすことになりました . それで , 専攻分野は貴方の分野と違いますが , 同君は社会問題にも熱心な研究者です . お話しになればきっと興味をお持ちになると信じます .

2005 年 8 月 30 日
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教授 白鷺花子