國立臺灣大學 114 學年度碩士班招生考試試題

科目: 專業英文(E)

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## 請將下列英文翻譯為中文

1. Wood is a natural composite material with excellent mechanical properties and low density. It is used for generations in numerous applications, such as building, construction, transportation, and landscape design. Some wood is hard, containing fibrous tissue. These fibers are robust in tension and immersed in matrix lignin to resist compression. Wood is a heterogeneous and anisotropic material with a complex structure covering various length scales. This anisotropic property explains the dependency of the mechanical properties on its material directions [Radial, Tangential, Longitudinal] and differs among species. (25%)

2.

- 2.1. Ecotones have been considered as unique environments, and the concepts of edge effect and ecotonal species have been widely used, especially in avian community ecology. (8%)
- 2.2. How climate shapes variation in the physiology, ecology, and evolution of organisms is a fundamental issue for organismal biologists. (8%)
- 2.3. Traditional ecological knowledge related to wild plant use has suffered significant transformations, such as the incorporation of exotic medicinal and edible species. (9%)
- 3. Soil is a natural resource which most of us either ignore or take for granted. Yet the thin layer of 'dirt' that covers much of the surface of the Earth is vital to the environment and invaluable to our societies. However, soil quality is declining in many areas, meaning that it is less able to perform its essential functions. One area of concern is the effect of soil degradation on the climate, and vice versa. (25%)
- 4. Forests and climate change are deeply connected, as forest loss and degradation is both a cause and an effect of our changing climate. When forests are destroyed, they release large quantities of carbon dioxide into the atmosphere, which further exacerbates the climate crisis. The agriculture, forestry and land-use sectors are responsible for 22% of global greenhouse gas emissions, and deforestation is a major driver. But forests are also a climate solution. Forests are the largest storehouse of carbon after the ocean. Their ability to absorb and lock away carbon, buffer communities from climate impacts like floods and provide food and livelihoods for millions of people is needed more than ever in a warming world. It's crucial that action to protect and restore forests is part of the global response to the climate crisis. (25%)

試題隨卷繳回