

國立嘉義大學九十六學年度 農業生物技術研究所碩士班招生考試試題

科目：專業英文

1. 請將下列英文短文翻譯成中文：（25分）

Golden Rice: New Genes Boost Rice Nutrients

Rice is the major staple food for hundreds of millions of people. It is generally consumed in its milled form with outer layers (pericarp, tegmen and aleurone layers) removed. The main reason for milling is to remove the oil-rich aleurone layer, which turns rancid upon storage, especially in tropical and subtropical areas. As a result, the edible part of rice grains consists of the endosperm, filled with starch granules and protein bodies, but it lacks several essential nutrients for the maintenance of health, such as carotenoids exhibiting provitamin A-activity. Thus, reliance on rice as a primary food staple contributes to vitamin A deficiency, a serious public health problem in at least 26 countries including highly populated areas of Asia, Africa and Latin America.

2. 請將下列英文短文翻譯成中文：（25分）

Rapid progress in genomics, bioinformatics, and proteomics is facilitated by the free and rapid exchange of data. A variety of databases – each of which can be located by Internal search engines – have been established to store information. For example, the Protein Data Bank, originally established in 1971, is thriving as a result of the revival of interest in protein structure and function and the advent of the Internet. Efforts are under way to interpret nucleotide sequence data for whole genomes in terms of the structure and function of specific proteins. Some of those databanks are updated daily.

3. 某篇關於阿茲海默症之研究報導，請將它翻譯成中文，畫底線部分可不必翻譯。（25分）

Alzheimer disease (AD) is a disorder characterized by a gradual loss of reason that begins with memory lapses and ends with the inability to perform any type of daily activity. AD is characterized by the presence of abnormally structured neurons and a reduced amount of acetylcholine. The AD neuron has two features: (1) Bundles of fibrous protein, called neurofibrillary tangles, surround the nucleus in the cells, and (2) Protein-rich accumulations, called amyloid plaques, envelop the axon branches. These abnormal neurons are especially seen in the portions of the brain involved in reason and memory. Drugs that enhance acetylcholine production are currently being tested in AD patients.

4. 請將下列中文句子，翻譯成英文：

- (1) 把 5 克 NaCl 與 25 克之 Tris-Cl 加入 900 毫升的蒸餾水，攪拌水溶液直到固體完全溶解，將其 pH 調到 7.0，再以蒸餾水將總體積補滿到 1000 毫升。（15分）
- (2) 取出老鼠肝臟，以 1X PBS 清洗完畢，再將之浸泡在 25 ml 含 1X trypsin 的培養液中靜置 4 小時。（10分）