

# 大同大學 96 學年度研究所碩士在職班入學考試試題

考試科目:科技英文

所別:生物工程研究所

第(全)頁

註:本次考試 不可以參考自己的書籍及筆記; 不可以使用字典; 不可以使用計算器。

請將下列英文翻譯成中文,每題25分。

(1)

From the physiological perspective(生理學的觀點), plants are viewed primarily as biochemical machines; machines that take in simple inorganic molecules and energy from their surrounding environment and use them to assemble complex chemical structure. The processes that enable plants to carry out these activities are themselves the sum of a multitude of coordinated chemical reactions. Ultimately, everything that plants are and everything that they do are based on chemical and physical processes.

(2)

Several important procedures contribute to the success of an experiment in DNA technology: the gene must be isolated from the original cell or organism; then the correct carrier (vector) (載體) of the gene must be selected: a suitable host cell or organism should be available; the recipient (接受的) cell or organisms must be induced to produce the protein encoded (密碼譯成) by the gene; and finally, the gene product should be in a state where it can be collected from the carrier.

(3)

In the past decade, miniature PCR devices have been realized in several different formats. The main advantages of miniature PCR devices are low reagent consumption, short reaction time, and small size. The first successful flow-through PCR device reported in the literature was fabricated from glass. Instead of repeatedly heating or cooling the PCR mixture as in the conventional thermocycler (熱循環儀), the reaction mixture flew through different temperature zones repetitively in the flow channel.

(4)

An elevated plasma cholesterol concentration has long been recognized as an independent risk factor for ischemic(缺血性) heart disease. It is now believed that reducing plasma cholesterol concentration decreases the risk of myocardial infarctions. Water-soluble fibers such as oat bran and pectin (果膠) have been shown to reduce plasma cholesterol concentration. Although the mechanism by which these fibers have their hypocholesterolemic effect is still uncertain, many studies indicate that increased bile acid excretion and/or decreased cholesterol absorption is responsible.