

大同大學 九十三 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 1/1 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。

1. All measurements have the goal of creating information. Measurements are also the basis for new process development. The study of cell metabolism and regulation would be impossible without reliable analytical methods. Increasing sophisticated equipment has been developed due to the growing demand on high quality measurements. (10%)
2. Reproducibility is a prerequisite for success of biotechnology in research and industrial production. Producing a product of constant high quality is one of the main goals in process automation. As a consequence of biological uncertainties, all process conditions as far as they can be influenced must be brought under control. (10%)
3. Biotechnology is a technology using biological systems. The basic unit of any biological system is the cell. In the past, at present and in the future, biotechnological approaches involve cells of many kinds, belonging to microorganisms, plants and animals. The new biotechnology is a comprehensive work. It is specifically directed to microbiologists, biochemists, molecular biologists, bioengineers, chemical engineers, and food and pharmaceutical chemists working in industry, at universities or at public institutions. (15%)
4. In recent years, biotechnology has become one of the most important and controversial issues in the world. New advances have expanded biotechnology into many different areas including genetic engineering. Because of the possible effects biotechnology might have on human society, it has been dubbed the "The Industrial Revolution of the 21st Century". Biotechnology affects many aspects of our daily life. Already, many foods and drugs we eat are made with biotechnology. The possibilities of biotechnology are endless, it can be applied in many different ways from agriculture to cancer medicines and with recent breakthroughs in genetics it can be used in genetic engineering. Because of the wide range of influences biotechnology has on our life, many advanced countries have already begun to set strict guidelines on the development and application of biotechnology. (25%)
5. In Taiwan, the research and development of biotechnology have already been going on for years, and the research results of various biotechnology R&D institutions are quite impressive. Although Taiwan's biotechnology is behind United States and other European countries in this field, but there are still a room for improvement in the research, investment, and marketing of biotechnology. Biotechnology enables Taiwan to develop new medicines and foods to compete on a global scale. It also helps industries facing environmental challenges. (20%)
6. Enzymes are the natural solution to industrial problems. With enzymes we can reduce the consumption of water, energy and harmful chemicals and still make production more efficient. Novozymes is the world leader in enzyme solutions. Based on an advanced biotech platform we produce and sell more than 500 enzyme products in 130 countries. Since 1941 Novozymes has introduced almost every new industrial enzyme on the market, making us the world's largest manufacturer of enzymes today. With our minds set on innovation, we will continue to be so in the future. (20%)