

國立嘉義大學 99 學年度

水生生物科學系碩士班招生考試試題

科目：專業英文

請將下列英文翻譯成中文

1. Very little is known concerning the effect of cortisol on muscle glycogen content, and as with liver glycogen, a clear trend as to the role of cortisol on muscle glycogen remains elusive. Because of its important role in muscle contraction and concomitant volatility, muscle glycogen is even less accessible experimentally than liver glycogen. Further, quite minor changes in metabolites, too small to be detected on a cell level, can have important repercussions because of the bulk of the tissue. (25%)
2. A number of studies have shown an increase in metallothionein expression in human tumors of the breast, colon, kidney, lung, nasopharynx, ovary, thyroid, and urinary bladder. However, metallothionein is down regulated in other tumors such as hepatocellular carcinoma and liver adenocarcinoma. Hence, the expression of metallothionein is not universal to all human tumors, but may depend on their differentiation status and proliferative index. (25%)
3. Today's world population is estimated to be about 6.5 billion, but is predicted to reach nine billion by 2050. To feed this mass of people, society must develop creative methods to provide a sufficient amount of nutritious food. Seafood products are part of a healthy, nutritious diet that now underlies an increasing global seafood demand. However, fisheries catch has leveled off during the last 15 years and has averaged 94.2 million t from 1995-2004. Fishery catch still falls short of the global seafood demand. The aquaculture of a multitude of organisms has been filling the gap for seafood demand and is increasing rapidly. Global aquaculture production increased from 31.1 to 59.4 million t from 1995 to 2004. (25%)
4. California is recognized for its diverse aquaculture industry spanning 9.5 degrees of latitude and tapping into a wide range of freshwater sources from cold to geothermal. Although coastal shellfish farming also has a long history in California, open ocean culture of fish and shellfish has not occurred. Southern California has an ideal Mediterranean-like climate and oceanographic conditions for developing such an industry. Water temperatures range from approximately 12 to 22°C, ocean swells rarely exceed 6 m and coastal islands dampen onshore flow of waves and wind. (25%)