

OLLSCOIL NA hÉIREANN

NATIONAL UNIVERSITY OF IRELAND, GALWAY

SEMESTER II EXAMINATIONS, 2005

Fourth Year (Denominated B.Sc. Degree in Marine Science; Honours)

MI421 Marine Microbiological Processes Specialist Topic

Prof. M. J. Dring
and the internal examiners*Answer FOUR questions*

1. Describe the influence of the development of stratification on the ecology of phytoplankton in temperate regions.
2. What do we understand in oceanography by the term 'front'. Outline the distribution of phytoplankton in the vicinity of tidal fronts.
3. Discuss the controls of a) Light and b) Nutrients on phytoplankton growth.
4. Outline the Light-Nutrient Mixing hypothesis in relation to the behaviour of phytoplankton.
5. What do you require to know to estimate the viability of a sub-surface high-density layer of phytoplankton? Outline briefly why this information is required and how it is applied.
6. What is the difference between 'new' and 'regenerated' nutrient? How does the seasonal thermocline control the balance in the availability of these two types of nutrient, and how could you estimate diffusion across a thermocline boundary?