

OLLSCOIL NA hÉIREANN

NATIONAL UNIVERSITY OF IRELAND, GALWAY

SEMESTER I EXAMINATIONS, 2003

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

BT308-MI308; MR 316/MR319: Marine Ecology 1

Prof M.J. Dring
and the internal examiners

Time allowed: *Three hours.*

Answer *four* questions, at least **ONE** from each section.

Use a **SEPARATE** answer book for each section

SECTION A

1. Describe the main differences in the annual cycles of phytoplankton production in temperate, tropical and polar seas.
2. Outline the changes in underwaterlight climate that occur with increasing depth. How can phytoplankton adapt to the underwater light field?
3. Write an essay on the 'microbial loop' and how it interacts with the classical food chain. Would 'microbial web' be a more descriptive title?
4. Write an essay on microorganisms and hydrothermal vents. Where would you find the microorganisms, what are they doing and what is the importance of their activities to the vent ecosystem?

P.T.O.

(MR316 Contd.)

SECTION B

5. Give a critical account of the differing needs of taxonomy and nomenclature when devising a classification for seaweed.
6. Give a detailed description of *either* a salt marsh *or* a mangrove ecosystem with particular reference to their role in nitrogen cycling.
7. Write an essay on rockpools as habitats for seaweeds.
8. Discuss the statement: 'The distribution of seaweeds in the intertidal zone is controlled by biotic factors'.