

OLLSCOIL NA hÉIREANN

NATIONAL UNIVERSITY OF IRELAND, GALWAY

SUMMER EXAMINATIONS, 1999

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

*MR 301: Fundamentals of Marine Science Paper 2*Professor A. Eleftheriou
and the internal examinersTime allowed: *Three hours.*Answer *five* questions, at least **ONE** from each section.

SECTION A

1. Discuss the role of bacteria in **either**:
 - (a) Euphotic waters; **or**
 - (b) Near-shore sediments.
2. Why are upwelling areas more productive than adjacent stratified regions? Outline the physical mechanisms promoting upwelling.
3. Describe the seasonal cycle of phytoplankton growth in temperate shelf-seas.

SECTION B

4. Describe methods used for the collection, examination and identification of wood-inhabiting marine fungi.
5. Discuss the relative importance of biotic and abiotic factors on seaweed zonation in the intertidal.
6. Write an essay on the effects of thallus size and shape on the survival of intertidal seaweed.

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SECTION C

7. Describe some of the adaptations of fish to life in the deep sea.
8. Write an essay on the biogenic modification of the soft seafloor.

OR

Give a critical appreciation of the use of macrobenthic animals in marine EIAs. How would you design a marine EIA that targets the soft seafloor and can call on state-of-the-art sampling equipment?

9. Provide an assessment of the hard seafloor as a habitat for animals.