

OLLSCOIL NA hÉIREANN**NATIONAL UNIVERSITY OF IRELAND, GALWAY**

SEMESTER II EXAMINATIONS, 2004

Fourth Year (Denominated B.Sc. Degree in Marine Science; Honours)**OC422 Oceanography**

Prof. M. J. Dring
and the internal examiners

Answer FOUR questions

- 1) Explain how benthic currents, and the processes that create them, may influence the zonation of benthic fauna across the continental slope west of Ireland.
- 2) Using examples from the North Sea or NE Atlantic, describe the biological indicators that can show large scale or climatic changes in the water mass distribution in the region.
- 3) Describe how 1-dimensional heating-stirring models can be used to describe the physics of the seasonally generated cyclonic gyre in the Irish Sea. What are the potential problems of using such models?
- 4) What are the advantages and disadvantages of using satellite altimeters to measure wave heights in the ocean. Why does the N Atlantic winter wave height have large inter-annual variability?
- 5) Explain what is meant by the NE Atlantic slope current and describe its character west of Ireland. Explain why the current is important to biological and chemical processes.
- 6) Explain the importance of the oceanography of the Rockall Trough to the Earth's climate. Describe some of the decadal variability observed in the region in the last 30 years.