

OLLSCOIL NA hÉIREANN, GAILLIMH  
NATIONAL UNIVERSITY OF IRELAND, GALWAY

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SEMESTER I EXAMINATIONS, 2001

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SECOND-YEAR SCIENCE

BOTANY

*BT206: Biology of Algae and Fungi*

Professor M.J. Dring  
Professor M.D. Guiry  
Professor P.M.T. Curran  
Dr D.B. Stengel

Time allowed: *Three hours.*

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

**Use a separate answer book for *each* section.**

SECTION A

1. Write an essay on phytoplankton, describing its communities, importance and seasonal growth pattern.
2. Describe the major morphological types found in the algae using examples.
3. Explain the main types of algal life-history patterns using specific examples.
4. Describe the different types of biotic (biological) interactions in which algae are involved.

SECTION B

5. Using labeled drawings, give an account of the anatomy, spore liberation and life cycle of *Phytophthora infestans*. How is this fungus controlled?
6. Describe, in detail, the sequence of events leading to the formation of mycelial clamp connections. Illustrate your answer.
7. Give an account of the disease cycle and control of the fungus responsible for Dutch elm disease.
8. Describe and illustrate the anatomy and life cycle of the ergot of rye fungus. Comment on the biotechnological and medical importance of this fungus.