

## OLLSCOIL NA hÉIREANN

NATIONAL UNIVERSITY OF IRELAND, GALWAY

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AUTUMN EXAMINATIONS, 2002

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## SECOND-YEAR SCIENCE

## BOTANY

*BT207: Plant growth and development*

Professor M.J. Dring  
Professor M.D. Guiry  
Dr M. McDonald  
Professor M. O'Connell  
Dr J. Fuller

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 phenomenon of photorespiration in higher plants.
2. Write a clear account of chemiosmosis in chloroplasts.
3. Evaluate the rôle of darkness in floral induction in higher plants.

## SECTION B

4. Give a concise, illustrated account of spore dispersal in the Bryophyta.
5. With regard to the anatomical structure of wood, write notes on any *three* of the following:
  - (i) tracheids;
  - (ii) rays;
  - (iii) ring-porous wood;
  - (iv) tension wood.
6. Describe the characteristics of wind pollinated flowers with reference to examples of families or species with which you are familiar. Provide illustrations with your answer.
7. Write concise notes on **two** of the following:
  - (a) the Leguminosae;
  - (b) the life cycle of pine
  - (c) nototribic pollination