

Summer Examinations, 2000

B.Sc. (Hons.)

**PHYSIOLOGY**

**FIRST PAPER**

Professor J. V. McLoughlin

Professor M. Kane

Dr. D. Colbert

Dr. A.C. Hynes

Dr. L.R. Quinlan

Answer FOUR questions out of SEVEN. Time allowed 3 hours.

1. Compare and contrast Northern and Southern blotting. Give examples of their uses.
2. Compare gel permeation and ion exchange chromatography. Give their comparative advantages and disadvantages.
3. Write an essay on methods for assay of hormones in body fluids and tissues.
4. Describe the mechanism of fluorescence and give an account of the use of fluorescent methods to study intracellular ions.
5. Describe the common patch clamp configurations and give examples of how they might be employed to study aspects of ion channel activity.
6. Describe the methods used to produce monoclonal antibodies.
7. Describe the immuno-histochemical staining methods used for light microscopy.