

National University of Ireland, Galway
Ollscoil na hÉireann, Gaillimh

SUMMER EXAMINATIONS 2000 HONOURS

Denominated Degree in Biotechnology (4BY 221)

BIOTECHNOLOGY (BG 401)

Fourth Paper

External Examiner: Professor N.C. Price

Time Allowed: *Three hours*

Write on *three* of the following topics, choosing at least *one* from each section.
Start each question in a new answer book and write the number on the front.

SECTION A

1. Describe the role of adaptor proteins in interleukin-2 gene expression.
2. Describe the three main signalling pathways that are activated following T cell receptor triggering, including reference to cross-talk between the pathways.
3. Outline the current methods for antibody production and indicate the advantages of each method.

SECTION B

4. Stem cells are the breakthrough of the year 1999 as cited by 'Science'. Discuss reasons for this choice.
5. 'Recent advances in medical research show immense potential for the treatment of disease.' Discuss.
6. 'Quality control is necessary for all multicellular organisms.' Discuss.