

National University of Ireland, Galway
Ollscoil na hÉireann, Gaillimh

SUMMER EXAMINATIONS 2002

BIOTECHNOLOGY I (BG 101)

Paper 1

External Examiner: Professor David Apps

Time Allowed: One hour

Section B

Answer 1 question from each subsection.

Subsection 1

1. Outline, with the aid of diagrams, how protein arrays can be used to detect a foreign antigen, such as anthrax, in the bloodstream.
2. Describe the properties of stem cells, and outline their potential applications in biotechnology.

Subsection 2

3. Describe with the help of a diagram how the polymerase chain reaction (PCR) is used to amplify DNA sequences.
4. What is a DNA probe? Give examples of the use of DNA probes with reference to DNA-based diagnostics.