

Ollscoil na h-Éireann, Gaillimh
The National University of Ireland, Galway

SPRING EXAMINATIONS 2002

THIRD YEAR SCIENCE EXAMINATIONS
IMMUNOTECHNOLOGY BI307

External examiners: Prof. C. Brown & Prof. D. K. Apps

Time allowed: *Three hours*

Write on *five* of the following topics

- 1. Describe what you understand by the ‘immunoglobulin superfamily’.**
- 2. Write an essay on ‘antibody–antigen binding’.**
- 3. Discuss the role played by the major histocompatibility complex (MHC) proteins in the immune response**

OR

Write an essay on ‘therapeutic applications of antibodies’.

- 4. “When the immune system fails to distinguish between self and non-self, the capacity for protection against foreign pathogens is lost”. Discuss the above statement using at least two examples of autoimmune disease.**
- 5. “The most important public health measure against infectious disease has been the development of vaccines”. Discuss.**
- 6. Discuss how the complement system is regulated, and what the possible disease states arising from failure of regulation are.**
- 7. Explain how recombinant antibody molecules may be displayed on filamentous phage.**
- 8. Discuss the important characteristics of an antibody, describing how at least two of these can be estimated.**