Cell recognition and the immune system

Specification reference	Checklist questions	
3.2.4	Can you describe how each type of cell has specific molecules on its surface that identify it?	☐
3.2.4	Can you describe how the surface molecules include proteins and enable the immune system to identify: • pathogens • cells from other organisms of the same species • abnormal body cells • toxins?	☐
3.2.4	Can you define 'antigen'?	☐
3.2.4	Can you describe the effect of antigen variability on disease and disease prevention?	☐
3.2.4	Can you explain the phagocytosis of pathogens and subsequent destruction of ingested pathogens by lysozymes?	☐
3.2.4	Can you describe the response of T lymphocytes to a foreign antigen (the cellular response)?	☐
3.2.4	Can you describe the role of antigen-presenting cells in the cellular response?	☐
3.2.4	Can you describe the role of helper T cells (TH cells) in stimulating cytotoxic T cells (TC cells), B cells, and phagocytes?	☐
3.2.4	Can you describe the response of B lymphocytes to a foreign antigen, clonal selection and the release of monoclonal antibodies (the humoral response)?	☐
3.2.4	Can you define 'antibody'?	☐

5 Cell recognition and the immune system Checklist

Specification reference	Checklist questions	
3.2.4	Can you describe the structure of an antibody?	☐
3.2.4	Can you explain the formation of an antigen-antibody complex?	☐
3.2.4	Can you describe the roles of plasma cells and of memory cells in producing primary and secondary immune responses?	☐
3.2.4	Can you describe the use of vaccines to provide protection for individuals and populations against disease?	☐
3.2.4	Can you explain the concept of herd immunity?	☐
3.2.4	Can you explain the differences between active and passive immunity?	☐
3.2.4	Can you describe the structure of the human immunodeficiency virus (HIV) and its replication in helper T cells?	☐
3.2.4	Can you explain how HIV causes the symptoms of AIDS?	☐
3.2.4	Can you explain why antibiotics are ineffective against viruses?	☐
3.2.4	Can you describe the use of monoclonal antibodies in targeting medication to specific cell types by attaching a therapeutic drug to an antibody?	☐
3.2.4	Can you describe the use of monoclonal antibodies in medical diagnosis?	☐
3.2.4	Can you describe the ethical sues associated with the use of vaccines and monoclonal antibodies?	☐
3.2.4	Can you explain how antibodies are used in the ELISA test?	☐

5 Cell recognition and the immune system Checklist

Specification reference	Checklist questions	
3.2.4	Can you discuss ethical issues associated with the use of vaccines and monoclonal antibodies?	☐
3.2.4	Can you evaluate methodology, evidence and data relating to the use of vaccines and monoclonal antibodies?	☐