

## Mark schemes

## Q1.

- (a) gene (for antigen)  
     *allow DNA / allele for antigen*  
     *ignore DNA / allele unqualified*  
     1
- (b) (pure) antigen(s)  
     1
- (c) the viruses may cause an infection  
     1
- (d) any **three** from:
- (sun) light  
     *ignore sun*
  - water  
     *allow moisture / rain*
  - ions / minerals / salts  
     *allow a named example*  
     *allow **two** named ions for 2 marks*  
     *ignore nutrients / food*
  - oxygen in the soil  
     *ignore carbon dioxide*
  - space
- 3
- (e) crop plants grow better  
     **or**  
     crop plants have higher yield  
     *ignore reference to competition*  
     1
- (f) any **one** from:
- may kill / harm / poison **other** plants  
     *ignore it is poisonous unqualified*
  - may pollute streams / rivers / soil
  - may kill / harm / poison humans / animals  
     *allow may alter taste of (GM) maize*  
     *allow may reduce biodiversity*  
     *ignore reference to cost*
- 1