

AS Level Biology A
H020/02 Depth in biology

Question Set 18

1. The sweet potato is a plant that is a staple food in countries such as China. The sweet potato is susceptible to a group of viruses known as potyviruses.
- (a) (i) It is difficult for the virus to enter the sweet potato cell.
- Suggest a barrier that makes it difficult for potyviruses to enter the sweet potato cell. [1]
- (ii) Suggest how the potyviruses enter the sweet potato cell. [1]
- (b) Sweet potato cells have a mechanism that recognises and destroys incorrectly formed mRNA or non-functional mRNA.
- (i) The nucleic acid in potyviruses is RNA.
- Suggest why this mechanism in sweet potato cells is able to counteract infection by a potyvirus. [2]
- (ii) An enzyme is involved in this process.
- Name the bond that is broken by this enzyme. [1]
- (iii) Suggest an advantage to a **non-infected** cell of having this process. [2]

Total Marks for Question Set 18: 7

OCR

Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge