



QUESTION WORKBOOK

Prokaryotic cells and viruses: less machinery, same problems

Cells, microscopy and biological organisation · Unit B01

AQA 3.2.1.1 · OCR A 2.1.1 (g), 4.1.1 · Edexcel A Topic 6.5–6.7 · CAIE 1.2

5 questions · 16 marks

NAVY SCREEN EDITION

SECTION A · Short, 1 to 2 marks

- A1** Name the substance from which a bacterial cell wall is built, and name the structure that carries genes such as antibiotic resistance and can be passed between bacteria. [2]

SECTION B · Standard, 3 to 5 marks

- B1** Compare the genetic material and the ribosomes of a bacterial cell with those of a eukaryotic cell. [4]

- B2** A student writes that a virus is simply a very small cell. Explain why this statement is wrong, referring to the structure of a virus in your answer. [4]

- B3** A culture is started with 200 bacteria which divide by binary fission every 30 minutes. Calculate how many bacteria are present after 5 hours, assuming that none of them die. [3]

- B4** A drug is designed to bind to the glycoprotein attachment proteins on the surface of HIV. Suggest why this drug would prevent HIV entering helper T cells, and suggest why it would have no effect on the influenza virus. [3]