



QUESTION WORKBOOK

Plan diagrams: reading a section and drawing only what matters

Cells, microscopy and biological organisation · Unit B01

OCR A 3.1.3, 4.1.1 · Edexcel B 2.1 vii, 4.4 vi · CAIE 7.1, 8.1, 9.1

5 questions · 15 marks

PRINT EDITION

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SECTION A · Short, 1 to 2 marks**A1**

PDR-Q6

State two rules of the low-power plan diagram convention, and state what a plan diagram records that a high-power drawing does not. [2]

SECTION B · Standard, 3 to 5 marks**B1**

PDR-Q1

Describe the distribution of xylem and phloem in a transverse section of the root and of the stem of a herbaceous dicotyledonous plant. [4]

B2

PDR-Q2

A root carries its xylem as a central column, while a stem carries its lignified vascular bundles in a ring near its surface. Suggest why each arrangement suits the forces that organ must withstand. [3]

B3

PDR-Q3

Identify each of the following cells seen on a stained blood smear, giving a reason for each: cell A is 12 μm across with a nucleus of three connected lobes; cell B is 18 μm across with a kidney-shaped nucleus; cell C is 7 μm across and has no nucleus.

[3]

B4

PDR-Q5

Sections are taken through three different airways. Describe how the cartilage seen in each section allows the trachea, a bronchus and a bronchiole to be told apart.

[3]

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