

AS Level Biology A
H020/01 Breadth in Biology

Question Set 5

1. A student looked at a slide containing onion root tip cells under a light microscope in order to identify cells in different stages of mitosis. Fig. 21 shows a diagram of what they observed.

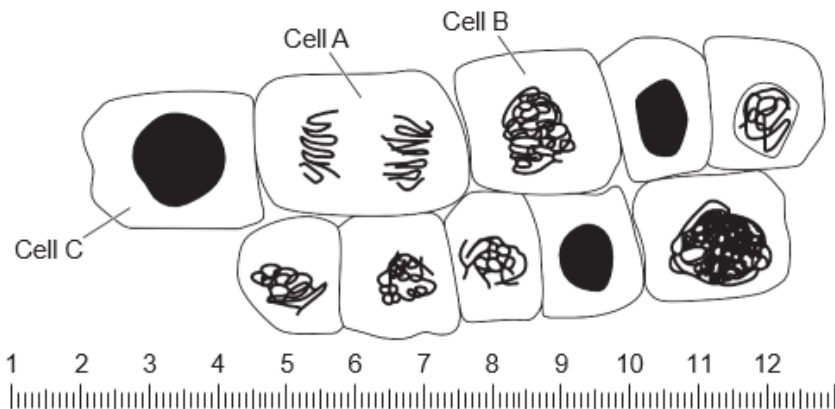


Fig 21

- (a) (i) Explain why onion root tips were used to view cells undergoing mitosis. [2]
- (ii) Suggest a stain that the student could have used to highlight the nuclei of these cells. [1]
- (b) The student used an eyepiece graticule, which is shown in Fig. 21. The student calibrated the graticule before carrying out the root tip squash. He observed that $20\ \mu\text{m}$ measured 2.35 divisions on the graticule.

Calculate the diameter of the nucleus in cell **C** in Fig. 21.

Answer..... [2]

Total Marks for Question Set 5: 5

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