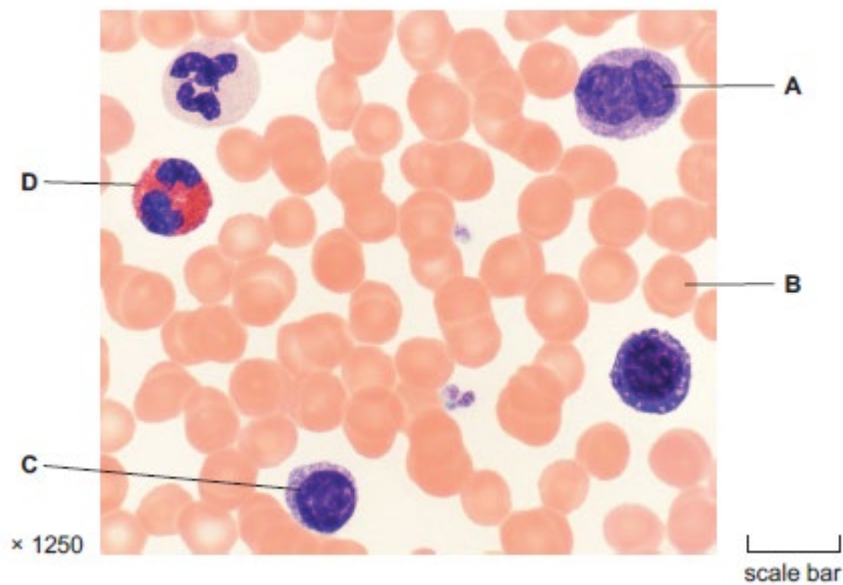


**AS Level Biology A**  
**H020/02** Depth in biology

**Question Set 14**

1. Fig. 1 is a photomicrograph of a mammalian blood smear.



**Fig. 1**

- (a) Calculate the image length, in  $\mu\text{m}$ , represented by the scale bar.  
Give your answer to **2** significant figures.

length = .....  $\mu\text{m}$  [2]

- (b) (i) Name the cell labelled **B**. [1]

- (ii) Cells **A**, **C** and **D** work together to carry out an important function.

State the function that cells **A**, **C** and **D** perform. [1]

- (c) The smear has been stained with haematoxylin and eosin stain. This is a differential stain.

- Haematoxylin stains nucleic acid blue.
- Eosin stains protein (including cytoplasmic proteins) pink or red.

- (i) Explain why it is important to use a differential stain when examining a blood smear under the microscope. [3]

- (ii) Using Fig. 1 and the information provided, suggest **and** explain why the cytoplasm of cell **C** and cell **D** reacted differently to the stain.

[4]

**Total Marks for Question Set 14: 11**

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