# TOPIC 3: PLANT NUTRITION & TRANSPORT

# EXERCISE 3

1. A farmer analyses the nitrogen content of the soil in two of his fields.
   The results of this analysis are shown in Fig. 2.1.

| | nitrogen content (arbitrary units) |
|---|---|
| field **A** | 135 |
| field **B** | 30 |
| recommended level | 120 |

Fig 2.1

**(a)** Explain why plants need nitrogen.

.....

..... [1]

**(b) (i)** The plants in field **B** do not grow well. In what other way would the appearance of the plants differs from normal?

..... [1]

**(ii)** How could the nitrogen content of field **B** be increased to the recommended level?

..... [1]

2. Complete the word equation for photosynthesis.

water + ..... → glucose + ..... [2]

3. A cross-section of part of a leaf, as it appears under the microscope, is shown in Fig.4.1.

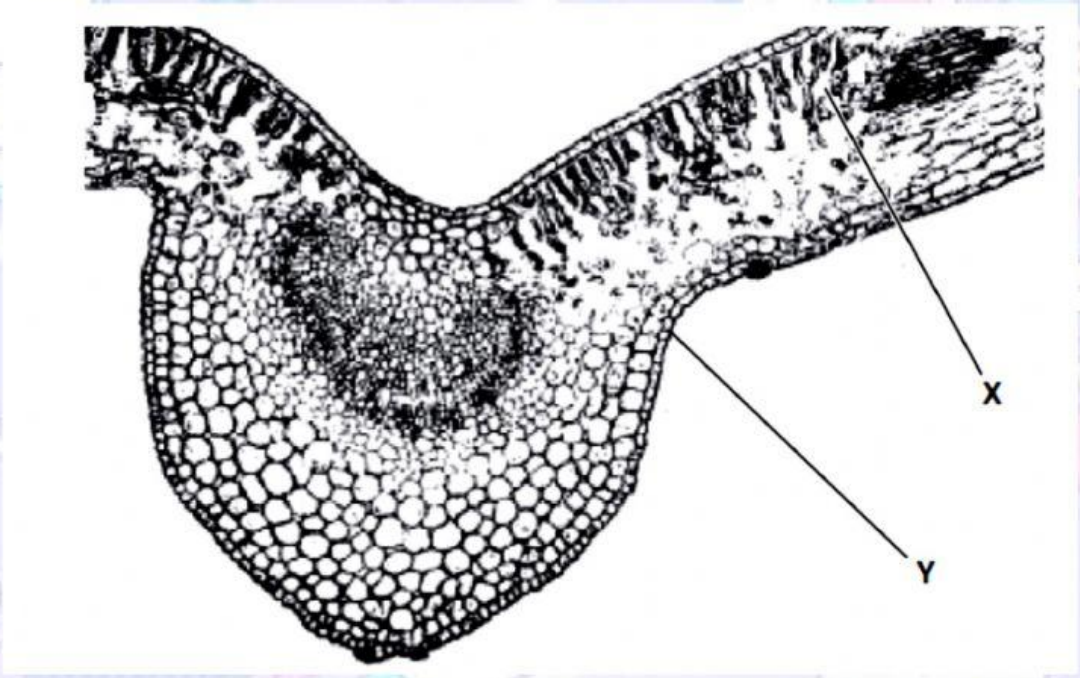


Fig.4.1

**a)** Name the tissues labelled **X** and **Y**.

**X** .....

**Y** ..... [2]

**(b)** The leaf contains air spaces.

Which tissue contains the most air spaces?

..... [1]

**(c)** Describe how carbon dioxide enters a leaf during photosynthesis.

.....

..... [2]