

CANDIDATE
NAME

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CENTRE
NUMBER

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CANDIDATE
NUMBER

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5038/03

October/November 2010

1 hour 15 minutes

Additional Materials: As listed in Confidential Instructions

Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
You may use a soft pencil for any diagrams or graphs.
Do not use staples, paper clips, highlighters, glue or correction fluid.
DO NOT WRITE IN ANY BARCODES.

Answer **all** questions.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [] at the end of each question or part question.

For Examiner's Use	
1	
2	
3	
Total	

This document consists of **6** printed pages, **1** blank page and **1** Supervisor's Report.

- 1 (a) **AS1** is a common weed. In the space below carefully draw **AS1** and clearly label **three** parts.

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[5]

- (b) **AS2** is also a common weed. In the space below carefully draw **AS2** and label an adventitious root, a rhizome and a leaf.

[5]

(c) **AS2** is a more difficult weed to control than **AS1**.

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From your observations, describe how the structure of **AS2** makes it more difficult to get rid of.

.....

.....

..... [2]

[Total: 12]

2 **AS3** and **AS4** are two samples of soil.

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- Pour 100 cm³ of water into a beaker.
- Plug the stem of a filter funnel with mineral wool, taking care not to block the hole.
- Fill the funnel with **AS3** to the marked line on the funnel as shown in Fig. 2.1.
- Use a retort stand, clamp and boss to hold the funnel above a 100 cm³ measuring cylinder, as shown in Fig. 2.1.
- Start the timer when starting to pour water into the funnel.
- Pour the water from the beaker into the funnel, being careful not to disturb the soil surface. Keep the funnel full of water until you have emptied the beaker.
- You are going to record how much water drains through the soil in 5 minutes.
- Record your results in Table 2.1.
- Repeat the experiment using **AS4**.

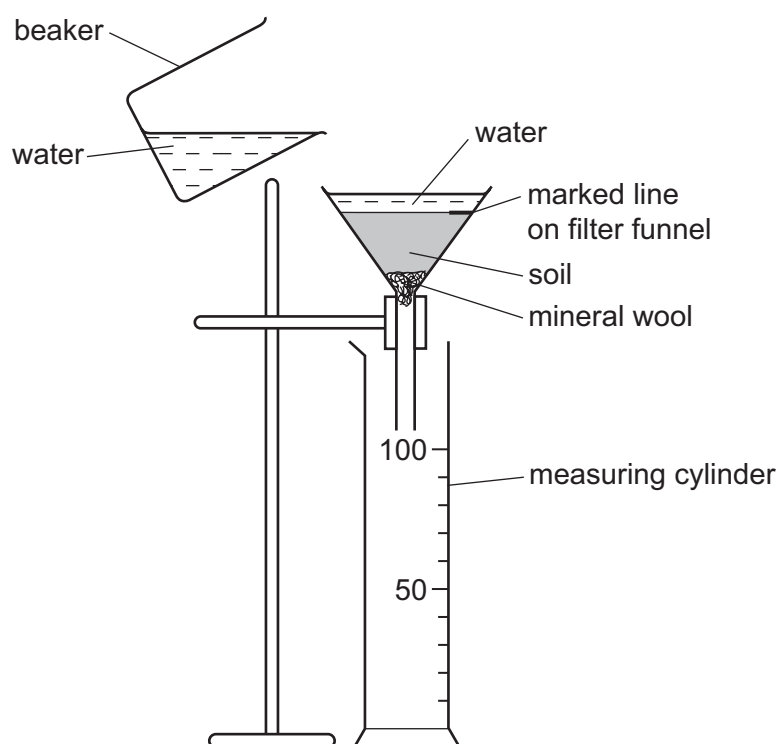


Fig. 2.1

Table 2.1

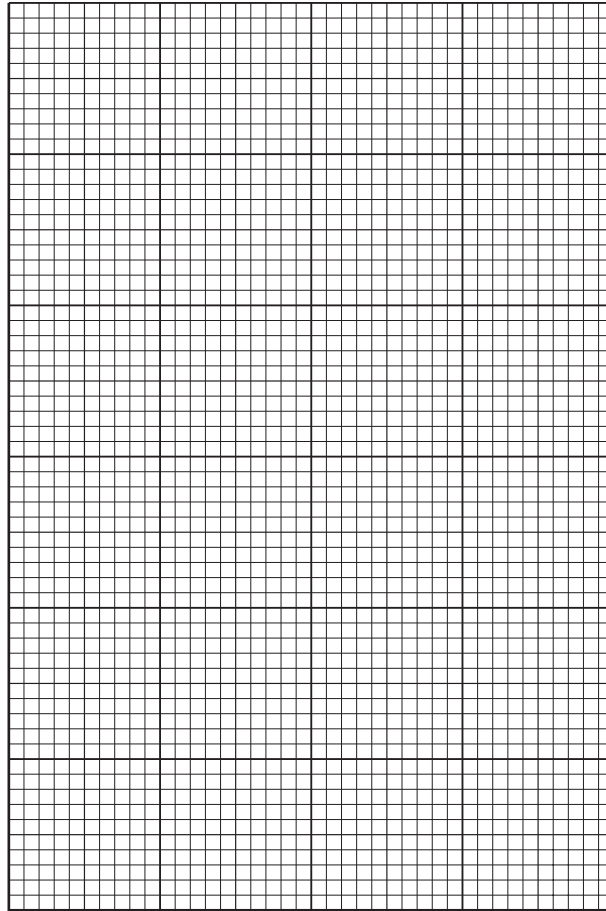
(a)

sample	amount of water (in cm ³) drained in 5 minutes
AS3	
AS4	

[2]

(b) On the graph paper below draw a bar chart to show the results of the drainage experiment.

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[4]

(c) Suggest reasons for your results for **AS3** and **AS4**.

.....

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.....

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[4]

[Total: 10]

- 3 (a) **AS5**, **AS6** and **AS7** are all oil-based products used on farm engines and for maintaining tools.

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You are provided with a sample of each oil-based product in a test tube. Each test tube also contains a small ball.

Carefully observe the properties of each sample by **gently** shaking the tube and **slowly** tipping the tube upside down.

Record your observations in the table below.

oil-based product	observations of liquid	movement of ball
AS5		
AS6		
AS7		

[6]

- (b) Suggest which oil would be best for protecting tools from rust. Give a reason.

.....

..... [2]

[Total: 8]

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SUPERVISOR'S REPORT

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**The Supervisor or Teacher responsible for the subject is asked to answer the following questions.*

1 Name the annual plant or weed used for **AS1**.

common name

scientific name

Name the perennial weed used for **AS2**.

common name

scientific name

2 State any problems encountered in providing the soils **AS3** and **AS4**.

.....

.....

3 Give details of any problems encountered in providing the samples **AS5**, **AS6** and **AS7**.

.....

.....

.....

Declaration to be signed by the Principal, and completed on the top script from the Centre.

The preparation of the Practical Test has been carried out so as to fully maintain the security of the examination.

Signed

Centre Number School

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