Topic 13: Extraction of metals [Exercise 3]

1. Fig. 1 shows an experiment about the rusting of iron fillings. As the iron rusts, the level of the water rises in the inverted test-tube.

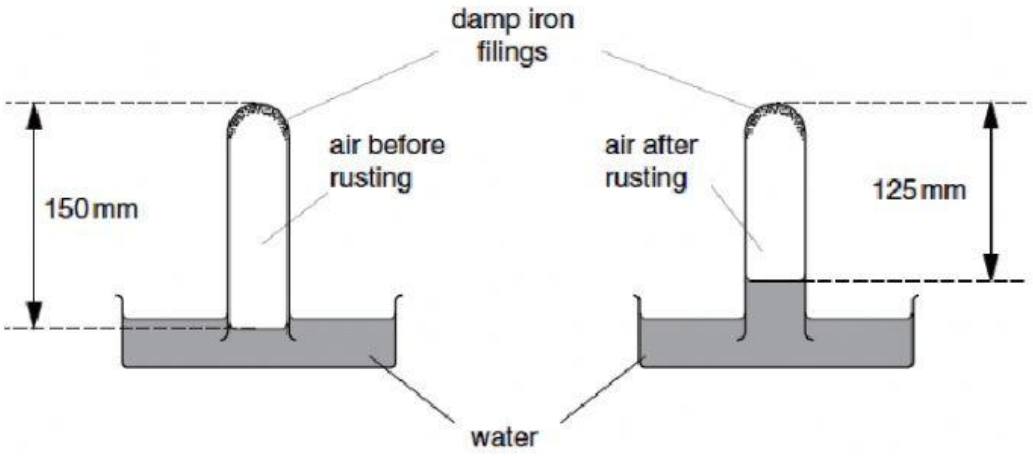


Fig. 1

(a) Use Fig. 1 to calculate how far up the test-tube the water rises.

.....[1]

(b) Which gas in the air is used up during rusting?

.....[1]

(c) In addition to this gas, what other substance is required for iron to rust?

.....[1]

(d) Iron may be prevented from rusting by galvanizing.

(i) Explain the meaning of *galvanizing*.

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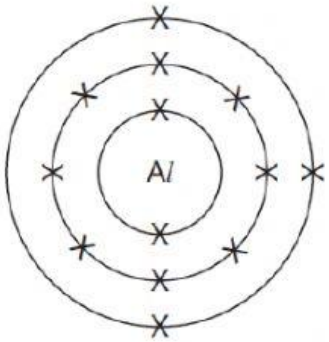
..... [2]

(ii) State **one** other way by which iron may be prevented from rusting.

..... [1]

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2. The electronic structure of aluminium is shown in the figure below:



(i) State the charge on the aluminium ion. ..... [1]

(ii) Using the electronic structure & the Periodic Table, explain why Al is a metal.

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.....[2]

(iii) Aluminium is used to make food containers because it is resistant to corrosion. Explain why aluminium is resistant to corrosion.

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.....[2]

LIVEWORKSHEETS