Question 1

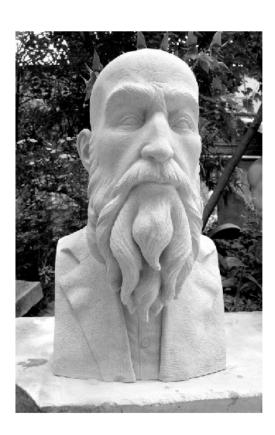
(iii) The sculpture, carved from limestone, of a bearded man in the photograph is new. How would you expect its appearance to change after years of exposure to acid rain?

For	
Examiner	
use only	

(1) (2)

(3)

How?



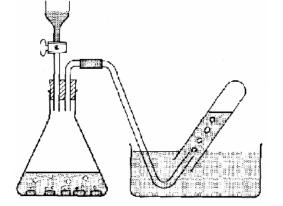
(iv) Limestone is calcium carbonate.Write a balanced chemical equation for the reaction of calcium carbonate with an acid of your choice.

(9)

Question 2

(h) The apparatus shown in the diagram was used to investigate the reaction of zinc with hydrochloric acid. Hydrogen gas is produced.

(i) Describe a test for hydrogen.



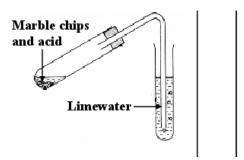
(ii) Write a *chemical equation* for the reaction of zinc with hydrochloric acid.

Question 3

(g) Carbon dioxide turns limewater milky.

Complete the *chemical equation* for the reaction of carbon dioxide with limewater.

 $Ca(OH)_2 + CO_2 \longrightarrow$



Question 4

(f) Complete the equation:

2HCl + CaCO₃

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