

Name: _____

Q.1

The writer Jules Verne (1828-1905) said “Water decomposed into its elements will be the fuel of the future”. The photograph shows a car that uses hydrogen as a fuel.



(i) How can hydrogen be produced from water?

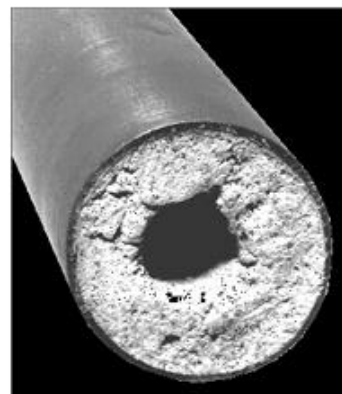
How? _____

(ii) Why is the exhaust emission from such a car environmentally safe?

Why? _____

Q.2

Water had been flowing through the pipe shown in the photograph for some time. The pipe originally had no internal deposit. Give a possible reason for the formation of the deposit. What do you think the deposit is?



Reason _____

Deposit _____

Q.3

Give a test to show that the droplets formed on the outside of a glass containing a cold drink are water. (6)



Q.4

(a)



The photograph shows a water treatment plant that produces water fit for domestic consumption. Name and describe four processes used in this treatment of water. (24)

(i) Name _____

Describe _____

(ii) Name _____

Describe _____

(iii) Name _____

Describe _____

(iv) Name _____

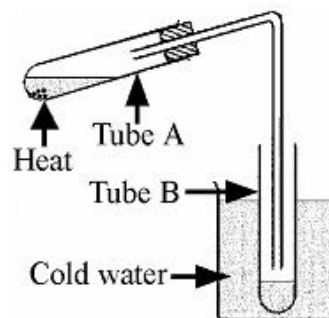
Describe _____

Q.5

Hard water in test tube A was heated and some water evaporated from it and condensed in test tube B. Is the water in test tube B *hard or soft*? Give a *reason* for your answer,

Is? _____

Reason _____



Q.6

The diagram shows an apparatus used to decompose water by passing an electric current through it. The volumes of gases released by this process can be measured as shown.

- (i) Name the *process* which decomposes a substance when electric current is passed through it. (3)

Name _____

- (ii) Why is a small amount of *sulfuric acid* added to the water? (3)

Why? _____

- (iii) Name *gas A* and give a *test* to confirm your answer. (6)

Name _____

Test for gas A _____

- (iv) Name *gas B* and give a *test* to confirm your answer. (6)

Name _____

Test for gas B _____

