CHAPTER 5

Water and Solution

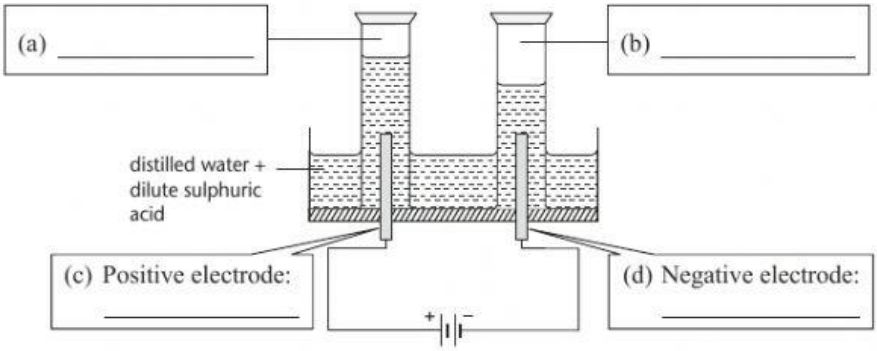
Instructions: *Answer the following questions.*

1 The melting point of ice and the freezing point of water are _____°C and the boiling point of water is _____°C.

2 Impurities will _____ the boiling point but _____ the melting point of ice or the freezing point of water.

3 _____ enables the dry leaf to float on the surface of water.

4 Fill in the blanks with the correct answers regarding the electrolytic cell.



(e) Two elements that made up a water molecule are _____ and _____.

(f) Water can be separated into hydrogen and oxygen through _____.

(g) The ratio of oxygen to hydrogen collected (O : H) = _____.

(h) Oxygen _____ the glowing wooden splinter (a test for oxygen).

(i) Hydrogen produces a _____ with a _____ wooden splinter (a test for hydrogen).

(j) Distilled water is added with a little dilute sulphuric acid to _____ the _____ of distilled water.

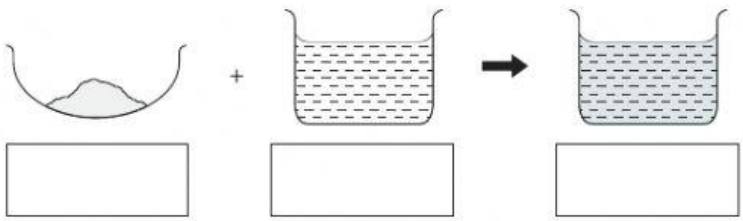
5 (a) The higher the surrounding temperature is, the _____ is the rate of evaporation of water.

(b) The larger the exposed surface area of water is, the _____ is the rate of evaporation of water.

(c) The lower the humidity is, the _____ is the rate of evaporation of water.

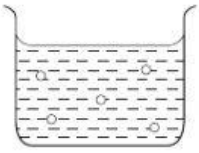
(d) The faster the movement of air is, the _____ is the rate of evaporation of water.

6 Label the following substances with 'solution', 'solvent' or 'solute'.



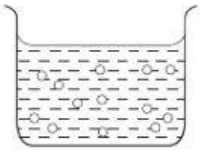
7 Fill in the blanks with 'saturated', 'dilute' or 'concentrated'.

(a)



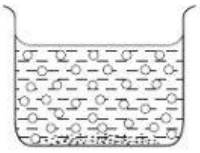
_____ solution
(has very little solute)

(b)



_____ solution
(has a lot of solutes)

(c)



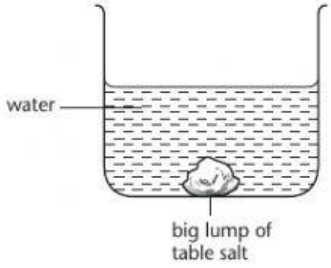
_____ solution
(has the maximum amount of solutes)

8 _____ is a universal solvent.

9 The liquid that has suspended substances in it is called a _____.

10 Cod liver oil and mayonnaise are examples of _____.

11 State **four** methods to increase the solubility of a big lump of table salt in water.



(a) _____
(b) _____
(c) _____
(d) _____

12 State the organic solvents which can be used to dissolve the following substances.

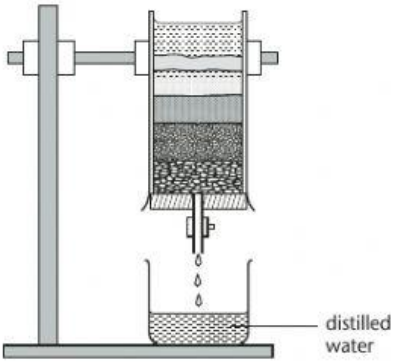
(a) Iodine : _____
(b) Shellac : _____
(c) Nail varnish : _____
(d) Fresh paint : _____
(e) Blood : _____
(f) Grease : _____
(g) Rust : _____
(h) Chlorophyll : _____

13 State the organic solvents used in daily life.

Organic solvent	Uses
(a)	To dilute paint
(b)	To prepare shellac solution
(c)	To stick plastic substances
(d)	To dissolve iodine in order to prepare antiseptic
(e)	To stick rubber sheets

14 Fill in the blanks with suitable words regarding the method of water purification.

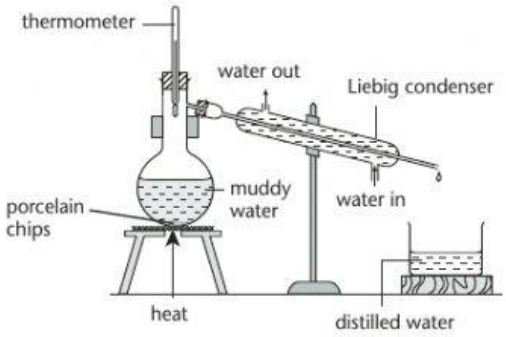
(a)



_____

- The water still contains _____ and _____.

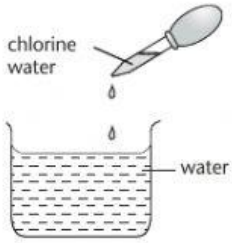
(b)



_____

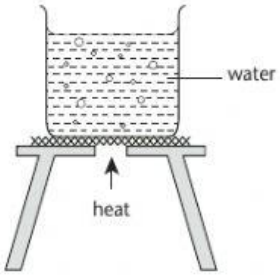
- Pure water is obtained.

(c)



_____

(d)



_____

For (c) and (d):

- Microorganisms are _____.
- The water still contains _____ and _____ particles.

15 (a) Complete the flow map below to show the steps of water purification in water treatment plant.