

Unit 5 The wonderful solvent—water

A Multiple-choice questions

1. C
2. C
3. B
4. C
5. A
6. B
7. D
8. A
9. A
10. D

B True or false questions

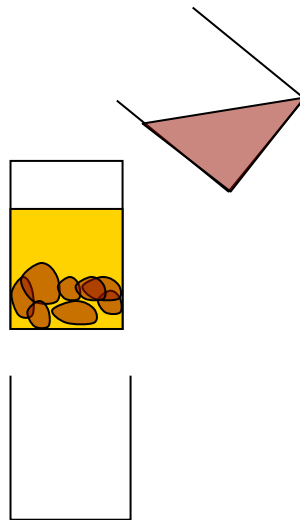
1. T
2. F
3. F
4. F
5. T

C Fill-in-the-blanks

1. purification
2. sediment
3. chlorine
4. Sewage
5. solute

D Short questions

1.



- (1) Make a hole on the bottom of the soft drink can.
- (2) Put the stones at the bottom of the soft drink can. Then pour the sand on top of the stones.
- (3) Pour the muddy water into the soft drink can.
- (4) Collect the filtered water with the empty beaker placed under the soft drink can.

2. The paper bag of a tea bag is used to separate tea leaves from the tea extract.

The grid/screen placed at the opening of a ditch is used to prevent the rubbish from

getting into the ditch. (Or other reasonable answers.)

3.

	Filtration	Distillation
Need energy supply?	no	yes
Impurities that can be removed	large and fine solids	large and fine solids, soluble impurities, micro-organisms
Name of the resulting liquid	filtrate	distillate

4. Advantages:

It is a secure method of getting drinking water because sea water is unlimited in supply./The time and amount of supply of drinking water can be under better control.

(Any ONE or other reasonable answers.)

Disadvantages:

This method uses a lot of energy because sea water needs to be boiled. This increases the cost./The cost may fluctuate as it depends on the price of fuel./Burning of fuel may result in air pollution.

(Any ONE or other reasonable answers.)

5. Cover the containers of water to prevent evaporation of water.

Water used for cleaning the face will be further used to clean dishes or clothes.

(Or any other reasonable answers.)

E Long questions

1.

- a Other possible impurities include micro-organisms and insoluble impurities such as sand or mud.
- b Use chlorination or boil the water to remove micro-organisms.
Use filtration to remove insoluble impurities such as sand or mud.
- c Use distillation to remove the arsenic compounds.
- d Dig a well which is deep enough to reach the deep aquifer. This area is free of arsenic compounds.

2.

- a Water vapour might be blown away from Hong Kong to other areas, so no clouds were formed and no rain fell in Hong Kong.
- b To build more reservoirs.
To buy water from other places, e.g. the Mainland China.
To obtain drinking water from sea water.
(Or other reasonable answers.)
- c Take showers instead of taking bath in a bath-tub.
Repair any dripping taps.
Wash more clothes and dishes at one time.
Wash vegetables and clothes in basins, not under running water.
(Any TWO or other reasonable answers.)

3.

- a Detergents, wastes flushed from toilets, wastes dumped from cooking (or other reasonable answers)
- b To let larger solid wastes settle and become sediment.
- c Pump air into the digestion tank.
- d The wastes may produce red tides. Marine life may not have enough oxygen to breathe and will die./Marine life may grow abnormally.
- e To kill the micro-organisms in the sewage.