2.30 Using the Earth's Resources and Potable Water: 10-minute Pack

AQA 8464 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Waste water from homes and industry (sewage) must be treated before it can be safely released into rivers.

(a) State the purpose of the screening stage in the treatment of waste water. **(1)**

(b) After screening, the waste water is left to stand in a settlement tank. Name the two products formed during this sedimentation stage. **(2)**

(Total for Question 1 is 3 marks)

2 A student says: 'tap water is pure water, because it is safe to drink.' This statement contains a common misunderstanding.

(a) Define the term 'potable water'. **(1)**

(b) Explain why the student's statement is incorrect, using the chemical meaning of the word 'pure'. **(2)**

(Total for Question 2 is 3 marks)

© Revision Library | revisionlibrary.co.uk

3 A reservoir supplies fresh water to a local water treatment works.

(a) Name the process used to allow larger suspended solid particles to settle out at the bottom of a tank. **(1)**

(b) Name the process used to remove any remaining small suspended particles by passing the water through a bed of sand (or a similar material). **(1)**

(Total for Question 3 is 2 marks)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 2.30 Using the Earth's Resources and Potable Water: 10-minute Pack

Question 1

(a) to remove large solid objects/debris (e.g. rags, plastic, grit) from the waste water (oe) **B1**

(a) Answer: To remove large solid objects and debris from the waste water.

(b) sludge (the solid material that settles at the bottom) (oe) **B1**

(b) effluent (the liquid that remains) (oe) **B1**

(b) Answer: Sludge (the settled solids) and effluent (the remaining liquid).

Question 2

(a) water that is safe for humans to drink (oe) **B1**

(a) Answer: Water that is safe for humans to drink.

(b) in chemistry, 'pure' means a substance that contains only one substance/compound, with nothing else mixed or dissolved in it (oe) **B1**

(b) potable water contains low levels of dissolved substances, such as mineral ions, so it is a mixture and not chemically pure, even though it is safe to drink (oe) **B1**

(b) Answer: In chemistry, 'pure' means a single substance with nothing else mixed in. Potable water contains low levels of dissolved substances such as mineral ions, so although it is safe to drink, it is a mixture and not chemically pure.

Question 3

(a) sedimentation cao **B1**

(a) Answer: Sedimentation

(b) filtration cao **B1**

(b) Answer: Filtration

© Revision Library | revisionlibrary.co.uk