

MARK SCHEME

GCSE

CHEMISTRY

AQA - COMBINED SCIENCE

C10 - TEST 1
USING RESOURCES
Beginner

Mark schemes

1.

(a) watch glass

1

(b) identify 0.29 as anomaly

1

$$\frac{0.12 + 0.14 + 0.15}{3}$$

or

$$\frac{0.41}{3}$$

allow $\frac{0.12 + 0.29 + 0.14 + 0.15}{4}$

or

$$\frac{0.70}{4}$$

1

(=) 0.14 (g)

allow 0.18 (g) if first marking point not awarded

1

an answer of 0.14 (g) scores 3 marks

(c) evaporating

or

vaporisation

allow from liquid to vapour / gas

do not accept boiling

1

(d) pure

or

no salt

allow converse answers relating to seawater

allow not a mixture

allow desalinated

do not accept less salt

do not accept filtered

1

(e) uses (a lot of) energy

allow needs heating

allow needs electricity

allow needs fuel or any suitable fuel

ignore references to equipment

ignore references to time

1

(f) filtering removes particles
allow solids or suitable named solids 1

sterilising kills bacteria / microbes
allow destroys viruses
allow kills viruses 1

[9]

2. (a) because it is a good conductor of electricity. 1

(b) (i) 2.1 (%) 1

(ii) correct bar for calcium at 3.6 %
allow error of +/- 0.05% 1

correct bar for iron at 5.0 %
allow error of +/- 0.05% 1

(c) (i) decomposition 1

(ii) carbon dioxide 1

(iii) carbon = 1
allow one 1

oxygen = 3
allow three 1

(iv) 44 (g)
allow forty four 1

(d) (i) to make alloys for specific uses. 1

- (ii) any **three** from:
- to conserve resources of iron or iron ore
allow steel instead of iron or iron ore
allow limited resource or non-renewable
 - to avoid the need for quarrying/mining
 - to conserve energy resources or fossil fuels
 - to limit the amount of carbon dioxide produced or to reduce global warming
 - to reduce the amount of landfill
- “it” = steel*
ignore cost and reuse and time and waste

3
[13]

3.

(a) (i) Solids

1

(ii) Chlorine

1

(iii) kill microbes / bacteria

allow to make the water safe to drink
ignore disinfect
ignore remove / get rid of microbes

1

(b) energy

allow heat

1

(c) improve dental health

allow reduce tooth decay
allow (local) government requirement
allow help teeth

1

[5]

4.

(a) contains (large amounts of) dissolved solids / difficult to remove dissolved solids

allow salty / too much salt
allow sea water makes you thirsty / vomit
allow polluted / untreated / contaminated

1

(b) filtered: removes solids / removes insoluble material / dirt

ignore large objects

1

chlorine: kills/destroy bacteria/microbes/ germs etc

allow disinfect / sterilise or gets rid of bacteria
ignore purify / clean

1

[3]