

Questions

Q1.

Answer the question with a cross in the box you think is correct ☐. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☐.

A sample of potable water contains impurities.

Why is this sample of water potable even though it contains impurities?

(1)

- ☐ **A** the impurities have no smell
- ☐ **B** the impurities are colourless
- ☐ **C** the impurities are harmless
- ☐ **D** the impurities are soluble

(Total for question = 1 mark)

Q2.

The three states of matter are solid, liquid and gas.

What is the name of the change of state when a liquid changes into a solid?

(1)

- ☐ **A** condensation
- ☐ **B** evaporation
- ☐ **C** freezing
- ☐ **D** melting

(Total for question = 1 mark)

Q3.

Mixtures of substances can be separated using different techniques.

Which of the following is a mixture of substances?

(1)

- ☐ **A** air
- ☐ **B** carbon dioxide
- ☐ **C** gold
- ☐ **D** titanium

Q4.

Which of the following substances will be a solid at 20 °C and will melt when placed in a beaker of hot water at 80 °C?

(1)

	melting point in °C	boiling point in °C
<input type="checkbox"/> A	122	249
<input type="checkbox"/> B	−7	59
<input type="checkbox"/> C	30	2403
<input type="checkbox"/> D	−32	27

(Total for question = 1 mark)

Q5.

An ink is a mixture of coloured substances dissolved in water.

Which method is used to separate the coloured substances in the ink?

(1)

- ☐ **A** chromatography
- ☐ **B** crystallisation
- ☐ **C** filtration
- ☐ **D** fractional distillation

(Total for question = 1 mark)

Q6.

Some questions must be answered with a cross in a box (☒). If you change your mind about an answer, put a line through the box (☒) and then mark your new answer with a cross (☒).

Figure 3 shows a metal spoon and two test tubes being heated in a water bath.

One test tube contains a piece of chocolate, the other some liquid egg white.

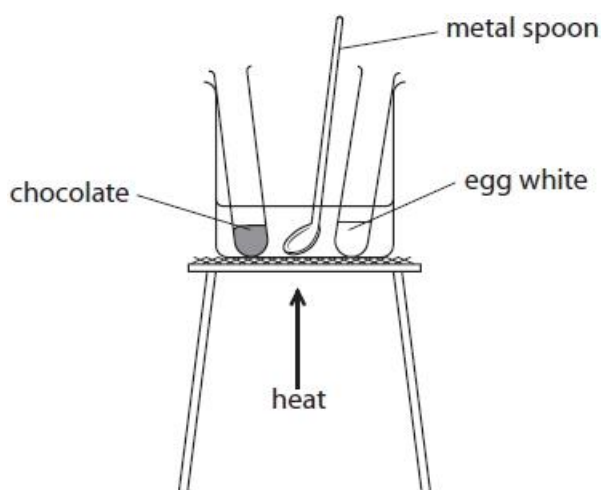


Figure 3

After heating, the spoon, the chocolate and the egg white are allowed to cool to room temperature.

Figure 4 shows the state of the three different substances before heating, when hot and after cooling.

substance	before heating	when hot	after cooling
metal spoon	solid	solid	solid
chocolate	solid	liquid	solid
egg white	liquid	solid	solid

Figure 4

What name is given to the process when the chocolate changes from a solid to a liquid?

(1)

- ☐ A condensing
☐ B evaporating
☐ C freezing
☐ D melting

(Total for question = 1 mark)

Mark Scheme

Q1.

Question number	Answer	Mark
	<p>C the impurities are harmless C is the only correct answer.</p> <p>A, B and D are incorrect as the properties are not relevant</p>	<p>(1) AO2</p>

Q2.

Question number	Answer	Mark
	<p>C freezing The only correct answer is C.</p> <p>A is incorrect because condensation is when a gas changes into a liquid. B is incorrect because evaporation is when a liquid changes into a gas. D is incorrect because melting is when a solid changes into liquid.</p>	<p>(1)</p>

Q3.

Question number	Answer	Mark
	<p>A air The only correct answer is A.</p> <p>B is incorrect since carbon dioxide is a compound and not a mixture. C and D are incorrect because gold and titanium are both metallic elements and not mixtures.</p>	<p>(1)</p>

Q4.

Question Number	Answer	Mark
	<p>C 30 2403</p> <p>The only correct answer is C</p> <p><i>A is not correct because it will be a solid above 80 °C</i></p> <p><i>B is not correct because it will be a liquid at 20 °C and gas at 80 °C</i></p> <p><i>D is not correct because it will be a liquid at 20 °C and gas at 80 °C</i></p>	<p>(1) AO 1 1</p>

Q5.

Question Number	Answer	Mark
	<p>A chromatography</p> <p>The only correct answer is A</p> <p><i>B is not correct this would not separate colours</i></p> <p><i>C is not correct because this would not separate colours</i></p> <p><i>D is not correct because this would not separate colours in best way</i></p>	<p>(1)</p> <p>AO 1 1</p>

Q6.

Question number	Answer	Mark
	<p>D melting is the only correct answer</p> <p>A is not correct as condensing is gas to liquid</p> <p>B is not correct as evaporating is liquid to gas</p> <p>C is not correct as freezing is liquid to solid</p>	<p>(1)</p> <p>AO1-1</p>