

GCSE Chemistry A (Gateway Science)

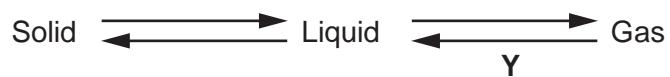
J248/01 Chemistry A C1-C3 and C7 (Foundation Tier)

Question Set 3

C3: Chemical Reactions

Multiple Choice Questions

1 Substances can exist in three states of matter.



What is change of state Y called?

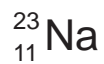
- A Condensing
- B Evaporating
- C Freezing
- D Melting

Your answer

A

[1]

2 A sodium atom can be shown as:



How many protons, neutrons and electrons are in a sodium atom?

- A 11 protons, 12 neutrons, 11 electrons
- B 11 protons, 11 neutrons, 12 electrons
- C 12 protons, 12 neutrons, 11 electrons
- D 12 protons, 11 neutrons, 11 electrons

Your answer

A

[1]

- 3 During the electrolysis of molten copper chloride, what is made at the **positive** electrode (anode)?
- A Chloride
 - B Chlorine
 - C Copper
 - D Hydrogen

Your answer

B

[1]

- 4 Which of these pH values shows the pH of a strong acid?
- A 1
 - B 5
 - C 7
 - D 10

Your answer

A

[1]

- 5 Lead nitrate contains lead ions, Pb^{2+} , and nitrate ions, NO_3^- .

What is the formula for lead nitrate?

- A PbNO_3
- B $\text{Pb}(\text{NO}_3)_2$
- C Pb_2NO_3
- D $\text{Pb}_2(\text{NO}_3)_2$



2 : 1



Your answer

B

[1]

6 Look at the equation.



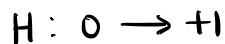
Which substance is **oxidised** in this reaction?

A CH₄

B CO₂

C H₂O

D O₂



Your answer

A

[1]

7 Look at the equation.



Which substance is the **oxidising agent** in this reaction?

A CH₄

B CO₂

C H₂O

D O₂

Your answer

D

[1]

8 What is the name of the gas made when zinc carbonate reacts with hydrochloric acid?

A Carbon dioxide

B Chlorine

C Hydrogen

D Oxygen

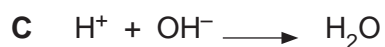
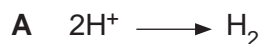
↓
so CO₂

Your answer

A

[1]

9 Which equation represents **neutralisation**?



Your answer

C

[1]

10 What is meant by the **activation energy** in a chemical reaction?

A The total energy used up when a reaction has stopped.

B The energy absorbed during a reaction.

C The energy released during a reaction.

D The minimum energy needed for a reaction to occur.

Your answer

D

[1]

11 A student reacts calcium carbonate with hydrochloric acid.



What physical state does **(g)** represent in the balanced symbol equation?

A Aqueous

B Gas

C Liquid

D Solid

Your answer

B

[1]

12 Lemon juice can be described as a weak acid.

What is the pH value for a weak acid?

- A pH 1
- B pH 4
- C pH 7
- D pH 14

Your answer

B

[1]

13 During the electrolysis of molten copper chloride, what is made at the **positive** electrode (anode)?

- A Chloride
- B Chlorine
- C Copper
- D Hydrogen

Your answer

B

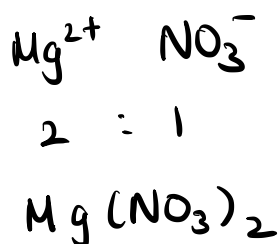
[1]

14 The formula of a magnesium ion is Mg^{2+} .

The formula of a nitrate ion is NO_3^- .

What is the formula of **magnesium nitrate**?

- A MgNO_3
- B Mg_2NO_3
- C $\text{Mg}(\text{NO}_3)_2$
- D $\text{Mg}_2(\text{NO}_3)_3$



Your answer

C

[1]

Total Marks for Question Set 3: 14



Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge