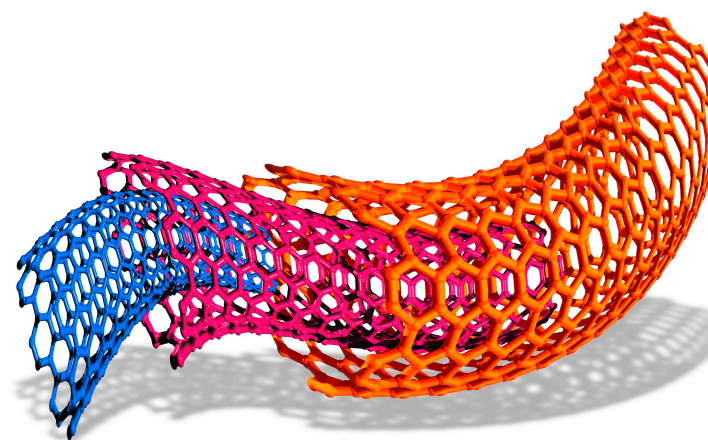


# Interactive Example Candidate Responses

Paper 3 (May / June 2016), Question 8

Cambridge IGCSE™  
Chemistry 0620



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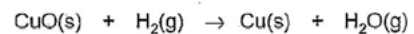
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- 8 A teacher passed hydrogen gas over hot copper(II) oxide.



- (a) Which substance is reduced in this reaction?

Explain your answer.

CuO because it lost oxygen.

..... [2]

Your  
Mark

8(a)

8(b)(i)

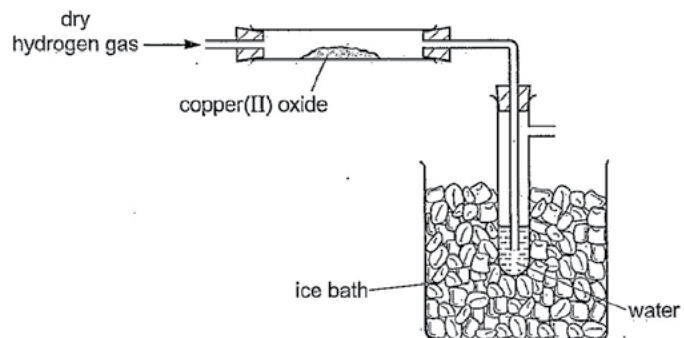
8(b)(ii)

8(b)(iii)

**Q8 Mark scheme**

(a)	copper(II) oxide; loses oxygen;
(b)(i)	(mass of copper oxide in tube) decreases;
(b)(ii)	<u>hydrogen</u> is flammable/ <u>hydrogen</u> is explosive;
(b)(iii)	anhydrous copper(II) sulfate goes blue/white copper(II) sulfate goes blue (1 mark for anhydrous copper(II) sulfate/white copper(II) sulfate)  <b>OR</b>  anhydrous cobalt(II) chloride goes pink/blue cobalt(II) chloride goes pink (1 mark for anhydrous cobalt(II) chloride/blue cobalt(II) chloride)

(b) The diagram shows the apparatus used.



The hydrogen was passed over the hot copper(II) oxide until the reaction was complete.

- (i) As the experiment proceeds, suggest what happens to the mass of copper(II) oxide.  
 ..... the mass of the copper (II) oxide will decrease ..... [1]
- (ii) Suggest why electrical heating is used in this experiment and **not** a Bunsen burner.  
 ..... ~~so that heat is given~~ because electrical heating gives heat energy but bunsen burner gives only one place. ..... [1]
- (iii) Describe the chemical test for the presence of water.  
 test... anhydrous copper (II) sulphate .....  
 result... white to blue ..... [2]

[Total: 6]

Select page

Your Mark

8(a)

8(b)(i)

8(b)(ii)

8(b)(iii)

Q8	Mark scheme
(a)	copper(II) oxide; loses oxygen;
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8 A teacher passed hydrogen gas over hot copper(II) oxide.



(a) Which substance is reduced in this reaction?

Explain your answer.

The copper ~~fox~~ is reduced because it  
has ~~been~~ lost the oxygen to Hydrogen [2]  
which makes Hydrogen ~~be~~ reduce oxidised

Your  
Mark

8(a)

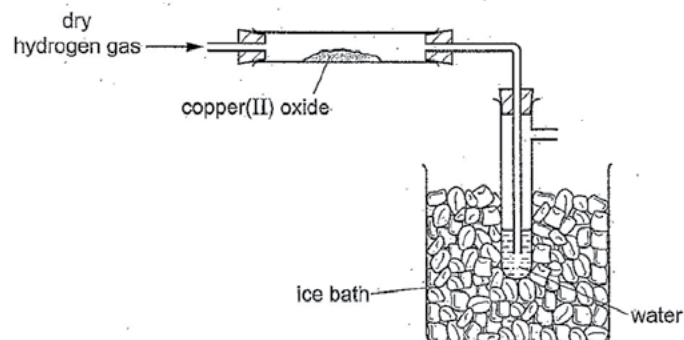
8(b)(i)

8(b)(ii)

8(b)(iii)

Q8	Mark scheme
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(b) The diagram shows the apparatus used.



The hydrogen was passed over the hot copper(II) oxide until the reaction was complete.

(i) As the experiment proceeds, suggest what happens to the mass of copper(II) oxide.

its mass becomes less because it is losing ~~ex~~ being reduced. [1]

(ii) Suggest why electrical heating is used in this experiment and **not** a Bunsen burner. [1]  
 because with electrical heating the temperature can be controlled where as the temperature of a bunsen burner cant.

(iii) Describe the chemical test for the presence of water.

test... get copper (I) crystals and add a solution to it.  
 result... if the crystals became blue then water is present. [2]

[Total: 6]

Your  
Mark

8(a)

8(b)(i)

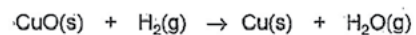
8(b)(ii)

8(b)(iii)

### Q8 Mark scheme

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- 8 A teacher passed hydrogen gas over hot copper(II) oxide.



- (a) Which substance is reduced in this reaction?

Explain your answer.

Water, H<sub>2</sub>O(g) steam H<sub>2</sub>O(g) is the  
g means gas [2]

Select  
page

Your  
Mark

8(a)

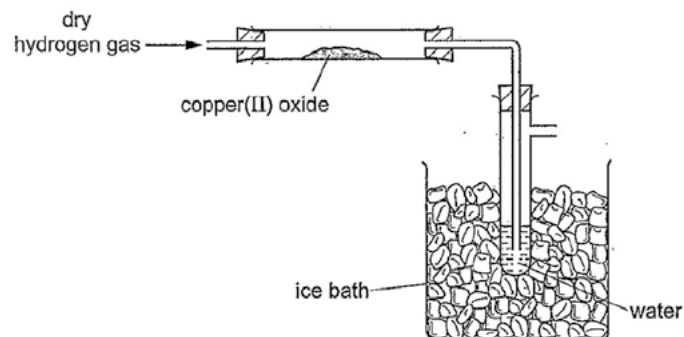
8(b)(i)

8(b)(ii)

8(b)(iii)

Q8	Mark scheme
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(b) The diagram shows the apparatus used.



The hydrogen was passed over the hot copper(II) oxide until the reaction was complete.

- (i) As the experiment proceeds, suggest what happens to the mass of copper(II) oxide.

decreases [1]

- (ii) Suggest why electrical heating is used in this experiment and **not** a Bunsen burner.

Electrical heating is more accurate [1]

- (iii) Describe the chemical test for the presence of water.

test... Universal indicator  
result... Should be green-ish [2]

[Total: 6]

Select page

Your Mark

8(a)

8(b)(i)

8(b)(ii)

8(b)(iii)

Q8	Mark scheme
(a)	copper(II) oxide; loses oxygen;
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Cambridge Assessment International Education  
The Triangle Building, Shaftesbury Road, Cambridge, CB2 8EA, United Kingdom  
t: +44 1223 553554  
e: [info@cambridgeinternational.org](mailto:info@cambridgeinternational.org) [www.cambridgeinternational.org](http://www.cambridgeinternational.org)

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