ENGLAND GCSE COMBINED SCIENCE OCR TWENTY FIRST CENTURY FOUNDATION · UNIT 9 · 25 QUESTIONS

Chemicals of the Natural Environment — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button so it can be fixed.

1 **Paintbrushes are cleaned in water. Why does the paint wash off?**

- A the paint burns in the water
- B the paint freezes in the water
- C the paint melts in the water
- D the paint dissolves

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2 **Silver coins are made of a metal. Which property do metals have?**

A they dissolve in water

B they are brittle

C they do not conduct electricity at all

D they conduct electricity

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3 **A chocolate cake is made from flour, sugar and eggs. Which ingredient provides protein?**

A eggs

B water

C flour

D sugar

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4 **Lemons contain citric acid. What is the pH of lemon juice likely to be?**

A 14

B 2

C 12

D 7

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5 **A thermometer measures temperature in degrees Celsius. What is the freezing point of water on this scale?**

A 0

B 32

C 100

D 10

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6 **A river is polluted by fertiliser. What grows too fast in the water?**

- A algae
- B reeds
- C fish
- D trees

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7 **Why is gold found uncombined in the Earth?**

- A it is very reactive
- B it is made by volcanoes
- C it is very unreactive
- D it dissolves in water

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8 **What is the test for an unsaturated hydrocarbon?**

A bromine water turns colourless

B a glowing splint relights brightly

C limewater turns cloudy white

D a lighted splint gives a pop

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9 **In fractional distillation, where do the smallest molecules come out?**

A they do not come out

B at the bottom

C at the top

D in the middle

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10 **What are alkenes used to make?**

A polymers

B fuels for cars and lorries

C salts for cooking

D acids for cleaning

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11 **What forms at the anode during the electrolysis of sodium chloride solution?**

A lead

B bromine

C hydrogen

D chlorine

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12 **An alkane with 14 carbon atoms is cracked. One product is an alkene with 2 carbon atoms. How many carbon atoms does the other product have?**

- **A** 14
- **B** 13
- **C** 12
- **D** 11

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13 **What is the general formula of the alkanes?**

- **A** CnH_2n+_2
- **B** CnH_2n-_2
- **C** CnH_2n+_1
- **D** CnH_2n

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14 **What are the products of electrolysing water with a little acid in it?**

A oxygen and chlorine gases

B hydrogen and chlorine gases

C hydrogen gas on its own

D hydrogen and oxygen

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15 **What is the overall equation for a hydrogen fuel cell?**

A hydrogen plus oxygen makes water

B hydrogen plus oxygen makes carbon dioxide

C hydrogen plus nitrogen makes ammonia

D oxygen plus water makes hydrogen

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16 **What is poly(ethene) made from?**

A methane

B ethane

C ethene

D propene

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17 **Why are biodegradable polymers useful?**

A they do not pile up as waste

B they are much stronger than others

C they are cheaper to make always

D they conduct electricity better

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18 **Why are hydrogen fuel cells not yet used in most cars?**

A hydrogen fuel cells are too heavy

B hydrogen is hard to store safely

C few places sell hydrogen fuel

D fuel cells make too much electricity

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19 **Why is extracting aluminium by electrolysis expensive?**

A cryolite is hard to find

B aluminium ore is very rare

C it uses a lot of electricity

D the process needs very high pressure

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20 **What is made when ethene reacts with steam?**

- A carbon dioxide and water
- B ethanol
- C ethane, a saturated gas
- D ethanoic acid, a weak acid

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21 **What forms at the anode during the electrolysis of molten lead bromide?**

- A hydrogen
- B bromine
- C chlorine
- D lead

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22 **An alkane with 10 carbon atoms is cracked. One product is an alkene with 3 carbon atoms. How many carbon atoms does the other product have?**

A 9

B 7

C 6

D 8

Understand It with Pulse | Flag a mistake

23 **What do alkanes make when they burn completely?**

A carbon and hydrogen

B carbon monoxide and water

C carbon dioxide and water

D oxygen and water

Understand It with Pulse | Flag a mistake

24 **When copper sulfate solution is electrolysed with carbon electrodes, what is made at the cathode?**

- **A** copper
- **B** hydrogen gas from the water
- **C** oxygen gas from the water
- **D** sulfur from the sulfate ions

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25 **What is one disadvantage of hydrogen fuel cells?**

- **A** they are noisy when running
- **B** hydrogen is hard to store
- **C** they make carbon dioxide
- **D** they use a lot of water

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ANSWER KEY

1.	D	**10.**	A	**19.**	C
2.	D	**11.**	D	**20.**	B
3.	A	**12.**	C	**21.**	B
4.	B	**13.**	A	**22.**	B
5.	A	**14.**	D	**23.**	C
6.	A	**15.**	A	**24.**	A
7.	C	**16.**	C	**25.**	B
8.	A	**17.**	A		
9.	C	**18.**	C		

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